Ref #15

Texas Department of Water Resources

INTEROFFICE MEMORANDUM

TO: Bryan W. Dixon, P.E., Chief Solid Waste and Spill Response Section, Enforcement and Field Operations Division

DATE: 26 June 1984

THRU:

FROM: Jay Snow, P.E., Chief Industrial Solid Waste Section, Permits Division

SUBJECT: RCRA Financial Assurance

Please review the documents concerning the facility referenced below for compliance with RCRA financial assurance regulations, then complete and return this memo.

Company: ARMCO, Inc. S-W Steel Division

Facility: Industrial Road, Houston

TDWR Permit/Registration: /30124

EPA ID Number: TXD000802959 & TXD000802942 this is the TXD # I have listed

EFO Evaluation

Date Request Received: 6/26/84

Documents Addressed:

		Instrument	Effective Date	Expiration Date	Amount
✓ A.	Closure	Financial Test	3/15/84	3/30/85	$270,456
✓ B.	Post-Closure	"	"	"	$112,282
✓ C.	Sudden Liability	Insurance	6/1/84	6/1/85	$1 million/2 million
✓ D.	Non-Sudden Liability	Financial Test	3/15/84	3/30/85	3 million/6 million

I have reviewed the documents submitted by the referenced company for compliance with the RCRA Financial Assurance regulations. My review indicates that those documents:

☐ are complete and were prepared in accordance with the applicable requirements.

☑ have the following discrepancies.
Comments: sudden liability needs hazardous waste certification

☐ Immediatly upon Permit issuance, the additional Financial Assurance requirements will apply: _____

Signed: Russell Kenneth

Date: 6/26/84

Rep #16

Checklist Generator
(attach. to correct checklist)

Date 7/30/82

INDUSTRIAL SOLID WASTE

Reg./Permit No. 30124

Compliance Monitoring Inspection Report

COMMENTS SHEET

SECTION: 1 Paragraph: The Armco, Inc. plant was mostly shutdown on July 30, 1982. The #1 electric furnace was in operation, but the blast furnace and #2 electric furnace were closed as well as many other units in the plant.

The bag house dust, etc. hauled to Greens Bayou Landfill is hauled by Statewide Industrial Service, 700 Rochmeade Drive, Kingwood, Texas, 713-358-4554. In 1981 the amount hauled to the landfill was 19,300 cubic yards. The current vol-

SECTION: Paragraph:

ume is half of what it was in 1981.

SECTION: 1 Paragraph: Wastes hauled offsite are asbestos and PCBs to Rollins Environmental Services, 01429, Copper coating solution to Malone Service Company, WDW 73, and spent solvents and paint sludges to Eltex Chemical #39028.

Checklist Generator
(attach. to correct checklis

Date 7/30/82

INDUSTRIAL SOLID WASTE

Reg./Permit No. 30124

Compliance Monitoring Inspection Report

COMMENTS SHEET

SECTION: B Paragraph: Please see facilities check lists for inactive sites.

SECTION: D-7 Paragraph: Wire mill drum area--PCB drum storage. This area is inside building with six inch concrete curb and man proof fence with locked gate. This area contained two drums of PCB solids. All of the drums were properly labeled and area properly marked

SECTION: D-7 Paragraph: Armco, Inc. was found in violation of PCB regulations during an EPA inspection on April 29, 1982. Armco had failed to inspect the transformers in service every three months as was required, failed to repair "moderately leaking" transformers within two days as required, and failed to weigh each capacitor placed into drum in PCB storage area.

Armco has 36 PCB transformers in service. On August 2, 1982 District 7 inspected 13 PCB transformers which had leaked. The leaks generally occurred where teflon tape had been used on valves, etc. Another sealing compound reputed to resist PCB's is now used.

Checklist Generator
(attach. to correct checkli

Date 7/30/82

INDUSTRIAL SOLID WASTE

Reg./Permit No. 30124

Compliance Monitoring Inspection Report

COMMENTS SHEET

SECTION: D-7 Paragraph: All of the transformers have steel pans filled with vermiculite absorbant under all valves to catch any drips. All transformers were inside buildings on concrete floors.

Transformers T01, T03, T04, T-10, T-11, T-12, T-13, T-15, T-17, T-18, T-20, T-23, and T-33 were inspected. The following transformers had one drop of PCB oil in pan, T-33, T-20, T-17 and T03. Transformer T-11 had a minor leak (about half of pan surface coated with PCB oil) at weld. It had been repaired previously,

SECTION: Paragraph: but needs to be repaired again. Mr. Cody said that the leaks EPA found at T01, T03, T04, T-23 and T-33 were one drop leaks.

The PCB inspections had been turned over to the Electrical Reportment by the Environmental Department. The Electrical Department failed to make all of the inspections.

Mr. Cody said that all PCB leaks had been repaired by 8/26/82.

SECTION: Paragraph:

Drum Reclaim area.

This is a paved curbed area with sump to store drums of flammable hazardous wastes, waste lubricating oil drums, etc... Area contains drum unloading equipment to transfer contents to four 2000 gallon tanks. Site is for the storage of empty used drums prior to reuse. Site contained only empty drums on July 30, 1982, because a recent shipment of paint solvents and sludges had been made.

Checklist Facilities
(attach. to correct checklis

Date 7/30/82

Req./Permit No. 30124

INDUSTRIAL SOLID WASTE

Compliance Monitoring Inspection Report

COMMENTS SHEET

SECTION: 2 Paragraph: Greens Bayou Landfill has an eight foot high fence on three sides. The side adjacent to Western Refuse, Inc. is not fenced. Western Refuse has fence except on Greens Bayou side and on side adjacent to rice hulls which are not passable. Western Refuse has a guard on duty at night. Armco Inc. landfill does not have a guard, but access is limited due to fence and Western Refuse.

SECTION: E Paragraph: Ignitable wastes are stored in drums or tanks in non-smoking areas.

SECTION: F-4 Paragraph: Armco, Inc. belongs to the Channel Industries Mutual Aid Association which provides backup fire fighters, etc..

Checklist Facilities
(attach. to correct checkli

Date 7/30/82

Reg./Permit No. 30124

INDUSTRIAL SOLID WASTE

Compliance Monitoring Inspection Report

COMMENTS SHEET

SECTION: F-6 Paragraph: Telephone numbers of contractors who dispose of their industrial wastes are available to their emergency coordinator.

SECTION: F-7 Paragraph: Armco has their own hospital facilities and arrangements made with Gulf Coast Hospital in Baytown and with a helicopter pad at the pipe mill for transfer to Hermann Hospital, Houston.

SECTION: G-2 Paragraph: Mr. Bill Cody is plant emergency coordinator.

Com ance Monitoring Inspection Rep
Financial Assurance, Closure and Post Closure Worksheet

5184 RLC

To be completed if the facility treats, stores or disposes of hazardous waste such that a permit is required or if the facility has submitted a Part A Application.

Facility: Armco Inc. EPA No. TXD000802042
Address: 13100 Industrial Rd. Permit/Reg. No. 30124
Facility Owner/Operator Fiscal Year End: 82 Month December Day 31 Inspection Date March 15, 1984

1. Preinspection call to ~~Bob Brydson~~ Kimble (2041) confirms the facility has submitted current financial assurance documents. Yes ✓ No ___ N/A ___
   If yes, check the documents submitted:

   ☑ Sudden liability amount $ 1 mill per occurrence, 2 mill annual
   ☑ Non-Sudden liability amount $ 3 mill per occurrence, $ 6 mill annual
   ☑ Closure assurance amount $ 270,456
   ☑ Post Closure assurance amount $ 112,282

2. ~~Brydson~~ Kimble reports documents adequate Yes ✓ No ___ N/A ___
   If no, list problems ___

For the following questions, review appropriate inspection checklist answers (Group I-Major pages 8-10, Non-major-page 3, and Group II-pages 21-27)

3. Closure Plan is adequate Yes ✓ No ___ N/A ___

4. Closure Cost Estimate, amount $1,931,828 is adequate Yes ✓ No ___ N/A ___
   If no, list proper amount $ ___

5. Post Closure Plan is adequate Yes ✓ No ___ N/A ___

6. Post Closure Cost Estimate, amount $362,223 is adequate Yes ✓ No ___ N/A ___
   If no, list proper amount $ ___

7. Facility has provided financial assurances for closure Yes ✓ No ___ N/A ___
   If yes, date effective March 15, 1984 Date expires ~~June~~
   Instrument Financial Test

8. Facility has provided financial assurances for post closure Yes ✓ No ___ N/A ___
   If yes, date effective March 15, 1984 Date expires ___
   Instrument Financial Test

9. Facility has provided appropriate sudden liability coverage Yes ✓ No ___ N/A ___
   If yes, date effective June 1, 1982 Date expires ___
   Instrument Liability insurance

10. Facility has provided appropriate non-sudden liability coverage Yes ✓ No ___ N/A ___
    If yes, date effective March 15, 1984 Date expires ___
    Instrument financial Test

FORM SUBMITTED

By: S. Parker 5784 RIC

Date: May 2, 1984

MAJOR FACILITIES STATUS SHEET
Initial ✓ Update ____

ID No.: TXD000802942 Registration/Permit No.: 30124

Facility Name: Amoco Inc District No.: 7

1. Ground Water Monitoring Status

Detection		Waiver	
Assessment	✓	NA	

2. Ground Water Monitoring Well System

a. Evaluated?	NA		NE		DATE EVAL'D Apr. 15, 1984
b. Adequate?	YES	✓	NO		

3. Ground Water Sampling, Analysis and Evaluation Program

a. Evaluated?	NA		NE		DATE EVAL'D April 5, 1984
b. Adequate?	YES	✓	NO		

4. Notice of Significant Increase in Parameter Concentrations

Submitted? July 21, 1983	NA		NO	DATE SUB'D

5. Ground Water Quality Assessment Report

a. Submitted?	NA		NO	✓	DATE SUB'D
b. Evaluated?	NE		DATE EVAL'D		
c. Adequate?	YES		NO	✓ *	
d. Showed hazardous waste constituents in ground water? - *Indicated by routine sampling					
	YES	✓ *	NO		

6. Waiver Demonstration

a. Evaluated?	NA	✓	NE		DATE EVAL'D
b. Adequate?	YES		NO		

7. Ground Water Monitoring Records

a. Evaluated?	NA		NE		DATE EVAL'D ~~March 15, 1984~~ 8/15/84
b. Adequate?	YES		NP	✓	

ID # TXD000802942
landfill ID# TXD000802957

8. Activities Subject to Closure/Post-Closure

Landfill ✓
Surface Impoundment ____
Land Treatment/Application ____
Incinerator ____
Waste Pile ____
Other (Specify) ____

9. Closure Plan

a. Evaluated? NE ____ DATE EVAL'D March 15, 1984
b. Adequate? YES ____ NO ✓

10. Closure Cost Estimate

a. Evaluated? NA ____ NE ____ DATE EVAL'D March 15, 1984
b. Adequate? YES ____ NO ✓
c. Amount: $ 1,931,828 UNKNOWN ____

11. Closure Assurance Instrument(s)

a. Evaluated? NA ____ NE ____ DATE EVAL'D March 15, 1984
b. Adequate? YES ✓ NO ____ NO INSTRUMENT ____
c. Type(s): ✓

TRUST FUND ____
FINANCIAL BOND ____
PERFORMANCE BOND ____
LETTER OF CREDIT ____
INSURANCE ____
FINANCIAL TEST ✓
CORPORATE GUARANTEE ____
STATE GUARANTEE ____
OTHER STATE MECHANISM ____

12. Post-Closure Plan

a. Evaluated? NA ____ NE ____ DATE EVAL'D March 15, 1984
b. Adequate? YES ____ NO ✓

13. Post-Closure Cost Estimate

a. Evaluated? NA ____ NE ____ DATE EVAL'D March 15, 1984
b. Adequate? YES ____ NO ✓
c. Amount: $ 302,223 UNKNOWN ____

14. Post-Closure Assurance Instrument(s)

a. Evaluated? NA ____ NE ____ DATE EVAL'D March 15, 1984
b. Adequate? YES ____ NO ____ NO INSTRUMENT ____
c. Type(s):

TRUST FUND ____
FINANCIAL BOND ____
PERFORMANCE BOND ____
LETTER OF CREDIT ____
INSURANCE ____
FINANCIAL TEST ✓
CORPORATE GUARANTEE ____
STATE GUARANTEE ____
OTHER STATE MECHANISM ____

ID # TXD000802942
Landfill ID# TXD000802959

15. Sudden Liability Instrument(s)

a. Evaluated? NA___ NE___ DATE EVAL'D March 15, 1984
b. Adequate? YES ✓ NO___ NO INSTRUMENT___
c. Amount: $1 Mill per occurrence, $2 mill annual aggregate
d. Type(s):
INSURANCE POLICY ✓ STATE GUARANTEE___
FINANCIAL TEST___ OTHER STATE MECHANISM___

16. Nonsudden Liability Instrument(s)

a. Evaluated? NA___ NE___ DATE EVAL'D March 15, 1984
b. Adequate? YES ✓ NO___ NO INSTRUMENT___
c. Amount: $3 Mill per occurrence, $6 mill annual aggregate
d. Type(s):
INSURANCE POLICY___ STATE GUARANTEE___
FINANCIAL TEST ✓ OTHER STATE MECHANISM___

17. Closure Process

a. Process Begun? NO ✓ DATE BEGUN_____
b. In accordance with approved plan and required procedures? YES___ NO___
c. Closure certifications received? NO___ DATE REC'D_____
d. Facility released from closure assurance and liability requirements? NA___ NO___ DATE RELEASED_____

18. Post-Closure Process

a. Process Begun? NA___ NO ✓ DATE BEGUN_____
b. In accordance with approved plan and required procedures? YES___ NO___
c. Survey plat/Record of wastes received? NO___ DATE REC'D_____
d. Post-closure period completed? NO___ DATE COMPLETED_____
e. Facility released from post-closure assurance requirements? NA___ NO___ DATE RELEASED_____

19. Permit Application

a. Called? NO ✓ DATE CALLED_____
b. Reason? GROUND WATER___ FINANCIAL ASSURANCE___
CLOSURE___ LIABILITY COVERAGE___
OTHER___

Ground Water Monitoring Program Compliance

To be attached to District Inspection Report

Texas Permit/Reg. No. SWR 30124

EPA I.D. Number TXD 000802959

Company Name: ARMCO, Inc.

1. Ground water monitoring status:
   Detection _____
   Alternate _____
   Waiver _____
   Assessment ✓ (Limited assessment)

	Yes	No	Not Applicable
2. Ground water monitoring reporting:			
Detection:			
First year data submitted and complete?	—	✓	—
Current year semi-annual data submitted and complete?	—	✓	—
Alternate or Assessment:			
Quarterly data submitted and complete?	—	✓	—

If no, what is missing? 1st year - 2 quarters of pesticides & radioactive & bacteria - all wells
2nd year - company has not adhered to modified sampling program - only 1 of 4 quarters has been reported.

3. No modifications to the ground water monitoring program have been made to maintain compliance with TAC Section 335.192(a) or 335.194(f)	—	✓

If no, explain modifications and give date approved:

3 down-gradient wells were relocated according to a plan approved during a meeting on 8/4/83. Co. sent a follow-up letter outlining the plan with modified sampling program & schedule on 8/10/83.
See comments - p.4

No modifications to the ground water monitoring program are needed to maintain compliance with TAC Section 335.192(a) or 335.194(f)	✓	—

If no, explain: _____

	Yes	No	Not Applicable
4. If the company is performing an alternate ground water monitoring program, is an annual report submitted containing the calculated or measured rate of migration of hazardous waste or hazardous waste constituents?	___	___	✓
5. If the company has a waiver, is any ground water monitoring program being performed?	___	___	✓

If yes, describe: _____

6. Company has notified of significant increase in concentration? ✓ ___

If yes, date of notification: 7/21/83

If yes, date ground water quality assessment plan submitted: 8/4/83

If yes, date ground water quality assessment plan approved by TDWR: 8/4/83

If ground water quality assessment plan has not been approved by TDWR, explain why: _____

Date assessment was scheduled to be completed:

8/19/84

7. Company has submitted ground water quality assessment report? ___ ✓ ___

If no, is the company on schedule? ___ ✓

If no, describe the schedule problem and new completion date: Company has stopped operations and has begun to dismantle steel-making operations. Only 1 report of results of quarterly sampling has been received to date

If yes, date report submitted: _____

	Yes	No	Not Applicable
8. Ground water quality assessment report indicates hazardous constituent in ground water?	✓*		
If no, has company returned to the original detection monitoring program?		✓	

If no, explain *No records in TDWR indicate that company has conducted any monitoring after 1/17/84*

** No actual assessment report has been submitted, only results of analyses of 1/17/84.*

Did the company notify TDWR in the ground water quality assessment report that the original detection monitoring program would be reinstated?		✓	

List the hazardous waste or hazardous waste constituents present in the ground water:

Cr - 0.20 mg/l MW-4A
Pb - 0.19 mg/l MW-4A

These values are taken from the only data submitted by the company since limited assessment plan was approved. Report of 2/8/84 contains results of samples taken on 1/17/84. Cr & Pb exceed drinking water standard of 0.05 mg/l.

If yes, and if the assessment program was implemented prior to facility closure, has the company submitted a quarterly ground water monitoring program to be performed until final closure of the facility?		✓	
Will this monitoring program determine the rate and extent of migration of the hazardous waste or hazardous waste constituents in the ground water?		✓	
Will this monitoring program determine the concentrations of the hazardous waste or hazardous waste constituents in the ground water?		✓	
Are annual reports submitted containing the results of the ground water quality assessment program, specifically, the calculated or measured rate of migration of hazardous waste or hazardous waste constituents during the reporting period?		✓	

Has the district office submitted a Request for Enforcement Action to address the ground water contamination?
Yes ___ No ✓

	Yes	No	Not Applicable
9. Has TDWR called the Part B hazardous waste permit application for this company?	✓		

Comments: In 8/4/83 meeting, ARMCO contended that T-Test failures were result of several factors: fresh water influx near upgradient well produces background values not really representative of native groundwater; downgradient well siting and construction caused landfill leachate contamination of samples - wells drilled through baghouse dust and class II waste; casings cracked by construction equipment; well isolated by slurry wall, etc. Limited purpose assessment calls for replacing wells (downgradient) and sampling quarterly for 1 year for pH, SC, TOC; Cl, Fe, Mn, Na, SO_4, Phenol in one quarter; Cd, Cr, Pb for 2 quarters.

Date Reviewed: 8/15/84

Reviewer: Paul S. Lewis

Note: Complete Items 4-7 on the major facility status sheet.

Company has closed many of its steel-making operations at this plant, but does not propose to close the landfill. No other action with regard to this limited assessment has been reported to this office since 2/8/84. Detection of hazardous waste constituents indicates that company needs to expand assessment to meet all requirements of 31 TAC 335.194.

Ref # 12

APR 4 1984

Mr. L.G. Weeks, Group Vice
President and Chief Financial Officer
Armco Incorporated
703 Curtis Street
Middletown, Ohio 45043

Reference: TXD000802942 and TXD000802959

Dear Mr. Weeks:

Thank you for your recent submittal of the required documentation to show compliance with the Resource Conservation and Recovery Act (RCRA) financial regulations, 40 CFR 265, Subpart H, as amended on April 7, 1982, 47 FR 16032, and April 16, 1982, 47 FR 16544. The State of Texas is authorized to operate an equivalent financial program in lieu of the Environmental Protection Agency. Therefore, by copy of this letter, your submittal is being forwarded to:

Ms. Susan Ferguson
Texas Department of Water Resources
P.O. Box 13087, Capitol Station
Austin, Texas 78711

If you have any questions, please call Henry Onsgard or me at (214) 767-8941.

Sincerely yours,

/s/ David L. Olschewsky

David L. Olschewsky, Chief
Technical Section

cc: Texas Department of Water Resources

bcc: RCRA Master File

6AW-HT:Onsgard:jb:7/8941:2/7/84

6AW-HT
Olschewsky

Ind. [illegible] 30124 Ref #13

INSP. DATE 5/15/84 EDD 10/1/84

POTENTIAL HAZARDOUS WASTE SITE SITE INSPECTION REPORT

REGION	SITE NUMBER (to be assigned by HQ)
VI	TX 05045

GENERAL INSTRUCTIONS: Complete Sections I and III through XV of this form as completely as possible. Then use the information on this form to develop a Tentative Disposition *(Section II)*. File this form in its entirety in the regional Hazardous Waste Log File. Be sure to include all appropriate Supplemental Reports in the file. Submit a copy of the forms to: U.S. Environmental Protection Agency; Site Tracking System; Hazardous Waste Enforcement Task Force *(EN-335)*, 401 M St., SW; Washington, DC 20460.

I. SITE IDENTIFICATION

A. SITE NAME: ARMCO, Inc. - Houston Works

B. STREET (or other identifier): 13100 Industrial Road

C. CITY: Houston

D. STATE: TX

E. ZIP CODE: 77215

F. COUNTY NAME: Harris

G. SITE OPERATOR INFORMATION

1. NAME: ARMCO, Inc. - Houston Works
2. TELEPHONE NUMBER: (713) 450-8547
3. STREET: 13100 Industrial Road
4. CITY: Houston
5. STATE: TX
6. ZIP CODE: 77215

H. REALTY OWNER INFORMATION *(if different from operator of site)*

1. NAME: ARMCO, Inc.
2. TELEPHONE NUMBER: (513) 425-2841
3. CITY: Middletown
4. STATE: OH
5. ZIP CODE:

I. SITE DESCRIPTION

Manufacturer of steel finished and semi-finished products. Plant closed in early 1984.

J. TYPE OF OWNERSHIP

☐ 1. FEDERAL ☐ 2. STATE ☐ 3. COUNTY ☐ 4. MUNICIPAL ☒ 5. PRIVATE

II. TENTATIVE DISPOSITION *(complete this section last)*

A. ESTIMATE DATE OF TENTATIVE DISPOSITION *(mo., day, & yr.)*:

B. APPARENT SERIOUSNESS OF PROBLEM

☐ 1. HIGH ☐ 2. MEDIUM ☒ 3. LOW ☐ 4. NONE

C. PREPARER INFORMATION

1. NAME: David W. Dunn
2. TELEPHONE NUMBER: (713) 943-2922
3. DATE *(mo., day, & yr.)*: 6/22/84

III. INSPECTION INFORMATION

A. PRINCIPAL INSPECTOR INFORMATION

1. NAME: David W. Dunn
2. TITLE: Project Engineer
3. ORGANIZATION: Engineering-Science, Inc.
9920 Gulf Freeway
Houston, TX 77034
4. TELEPHONE NO. *(area code & no.)*: (713) 943-2922

B. INSPECTION PARTICIPANTS

1. NAME	2. ORGANIZATION	3. TELEPHONE NO.
David W. Dunn	Engineering-Science, Inc.	(713) 943-2922
Thomas J. Stang	Engineering-Science, Inc.	(713) 943-2922

C. SITE REPRESENTATIVES INTERVIEWED *(corporate officials, workers, residents)*

1. NAME	2. TITLE & TELEPHONE NO.	3. ADDRESS
Bill Chadick	Environ. Coord. (713) 450-8060	13100 Industrial Road Houston, TX 77215
Bill Cody	Environ. Eng. (606) 329-7760	ARMCO Ashland, KY
Joe Brown	Works Engineer (713) 450-8561	13100 Industrial Road Houston, TX 77215
Ron Thompson	Super. Env. Eng. (513) 425-2841	Middletown, OH

Continued From Front

III. INSPECTION INFORMATION (continued)

D. GENERATOR INFORMATION (source of waste)

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE GENERATED
ARMCO, Inc.	(713) 450-8547	13100 Industrial Road Houston, TX	See Attachment D

E. TRANSPORTER/HAULER INFORMATION

1. NAME	2. TELEPHONE NO.	3. ADDRESS	4. WASTE TYPE TRANSPORTED
Statewide Industrial	(713) 455-0815	1541 Sheffield Blvd. Houston, TX 77015	Baghouse dust
Rollins	(713) 479-6601	P. O. Box 609 Deer Park, TX 77536	PCB waste/ Coke plant sludge

F. IF WASTE IS PROCESSED ON SITE AND ALSO SHIPPED TO OTHER SITES, IDENTIFY OFF-SITE FACILITIES USED FOR DISPOSAL.

1. NAME	2. TELEPHONE NO.	3. ADDRESS
See Attachment B		

G. DATE OF INSPECTION (mo., day, & yr.)	H. TIME OF INSPECTION	I. ACCESS GAINED BY: (credentials must be shown in all cases)
5/15/84	9:00AM-4:00PM	[XX] 1. PERMISSION [ ] 2. WARRANT

J. WEATHER (describe)

80° partly cloudy

IV. SAMPLING INFORMATION

A. Mark 'X' for the types of samples taken and indicate where they have been sent e.g., regional lab, other EPA lab, contractor, etc. and estimate when the results will be available.

1. SAMPLE TYPE	2. SAMPLE TAKEN (mark 'X')	3. SAMPLE SENT TO:	4. DATE RESULTS AVAILABLE
a. GROUNDWATER			
b. SURFACE WATER	X	Engineering-Science, Inc.	
c. WASTE			
d. AIR			
e. RUNOFF			
f. SPILL			
g. SOIL	X	Engineering-Science	
h. VEGETATION			
i. OTHER (specify)			

B. FIELD MEASUREMENTS TAKEN (e.g., radioactivity, explosivity, PH, etc.)

1. TYPE	2. LOCATION OF MEASUREMENTS	3. RESULTS
NONE TAKEN		

Continue On Page 3

Continued From Page 2

IV. SAMPLING INFORMATION (continued)

C. PHOTOS

1. TYPE OF PHOTOS: [X] a. GROUND [ ] b. AERIAL

2. PHOTOS IN CUSTODY OF: U.S. EPA Region VI (Copies to ARMCO)

D. SITE MAPPED?

[X] YES. SPECIFY LOCATION OF MAPS: Attachments C & D

E. COORDINATES

1. LATITUDE (deg.-min.-sec.): 29° 45' 25"

2. LONGITUDE (deg.-min.-sec.): 95° 12' 00"

V. SITE INFORMATION

A. SITE STATUS

[XX] 1. ACTIVE (Those industrial or municipal sites which are being used for waste treatment, storage, or disposal on a continuing basis, even if infrequently.)

[XX] 2. INACTIVE (Those sites which no longer receive wastes.)

[ ] 3. OTHER (specify): _____ (Those sites that include such incidents like "midnight dumping" where no regular or continuing use of the site for waste disposal has occurred.)

B. IS GENERATOR ON SITE?

[ ] 1. NO [XX] 2. YES (specify generator's four-digit SIC Code): 331

C. AREA OF SITE (in acres): 800

D. ARE THERE BUILDINGS ON THE SITE?

[ ] 1. NO [X] 2. YES (specify): office, foundry, production, warehouse

VI. CHARACTERIZATION OF SITE ACTIVITY

Indicate the major site activity(ies) and details relating to each activity by marking 'X' in the appropriate boxes.

X'	A. TRANSPORTER	X'	B. STORER	X'	C. TREATER	X'	D. DISPOSER
	1. RAIL		1. PILE		1. FILTRATION	X	1. LANDFILL
	2. SHIP		2. SURFACE IMPOUNDMENT		2. INCINERATION		2. LANDFARM
	3. BARGE	X	3. DRUMS		3. VOLUME REDUCTION		3. OPEN DUMP
	4. TRUCK	X	4. TANK, ABOVE GROUND		4. RECYCLING/RECOVERY		4. SURFACE IMPOUNDMENT
	5. PIPELINE		5. TANK, BELOW GROUND		5. CHEM./PHYS./TREATMENT		5. MIDNIGHT DUMPING
	6. OTHER (specify):	X	6. OTHER (specify): a. Roll-off box		6. BIOLOGICAL TREATMENT		6. INCINERATION
					7. WASTE OIL REPROCESSING		7. UNDERGROUND INJECTION
					8. SOLVENT RECOVERY	X	8. OTHER (specify): a. pipe mill acid pit b. Coke plant acid pit
					9. OTHER (specify):		

E. SUPPLEMENTAL REPORTS: If the site falls within any of the categories listed below, Supplemental Reports must be completed. Indicate which Supplemental Reports you have filled out and attached to this for..

[X] 1. STORAGE [ ] 2. INCINERATION [X] 3. LANDFILL [X] 4. SURFACE IMPOUNDMENT [ ] 5. DEEP WELL

[ ] 6. CHEM/BIO/PHYS TREATMENT [ ] 7. LANDFARM [ ] 8. OPEN DUMP [ ] 9. TRANSPORTER [ ] 10. RECYCLOR/RECLAIMER

VII. WASTE RELATED INFORMATION

A. WASTE TYPE

[X] 1. LIQUID [X] 2. SOLID [X] 3. SLUDGE [ ] 4. GAS

B. WASTE CHARACTERISTICS

[X] 1. CORROSIVE [ ] 2. IGNITABLE [ ] 3. RADIOACTIVE [ ] 4. HIGHLY VOLATILE

[X] 5. TOXIC [ ] 6. REACTIVE [X] 7. INERT [ ] 8. FLAMMABLE

[ ] 9. OTHER (specify):

C. WASTE CATEGORIES

1. Are records of wastes available? Specify items such as manifests, inventories, etc. below.

Manifests, registration

Yes, but none on old pit areas.

Continue On Reverse

Continued From Front

VII. WASTE RELATED INFORMATION (continued)

2. Estimate the amount (specify unit of measure) of waste by category. mark 'X' to indicate which wastes are present.

a. SLUDGE	b. OIL	c. SOLVENTS	d. CHEMICALS	e. SOLIDS	f. OTHER
AMOUNT: None	AMOUNT: None	AMOUNT: 212,700	AMOUNT: 262,700	AMOUNT: 53,000,000	AMOUNT: None
UNIT OF MEASURE:	UNIT OF MEASURE:	UNIT OF MEASURE: lbs/yr	UNIT OF MEASURE: lbs/yr	UNIT OF MEASURE: lbs/yr	UNIT OF MEASURE:
	X (1) OILY WASTES	X (1) HALOGENATED SOLVENTS	X (1) ACIDS	X (1) FLYASH	X (1) LABORATORY, PHARMACEUT.
X (1) PAINT, PIGMENTS	(2) OTHER (specify):	X (2) NON-HALOGNTD. SOLVENTS	X (2) PICKLING LIQUORS	(2) ASBESTOS	(2) HOSPITAL
(2) METALS SLUDGES		(3) OTHER (specify):	(3) CAUSTICS	(3) MILLING/MINE TAILINGS	(3) RADIOACTIVE
(3) POTW			(4) PESTICIDES	(4) FERROUS SMELTING WASTES	(4) MUNICIPAL
(4) ALUMINUM SLUDGE			(5) DYES/INKS	(5) NON-FERROUS SMLTG. WASTES	(5) OTHER (specify):
(5) OTHER (specify):			(6) CYANIDE	X (6) OTHER (specify): Furnace dust	
			(7) PHENOLS		
			(8) HALOGENS		
			(9) PCB		
			(10) METALS		
			X (11) OTHER (specify): Permanganate waste		

D. LIST SUBSTANCES OF GREATEST CONCERN WHICH ARE ON THE SITE (place in descending order of hazard)

1. SUBSTANCE	2. FORM (mark 'X') a. SOLID	b. LIQ.	c. VAPOR	3. TOXICITY (mark 'X') a. HIGH	b. MED.	c. LOW	d. NONE	4. CAS NUMBER	5. AMOUNT	6. UNIT
Unknown										

VIII. HAZARD DESCRIPTION

FIELD EVALUATION HAZARD DESCRIPTION: Place an 'X' in the box to indicate that the listed hazard exists. Describe the hazard in the space provided.

☐ A. HUMAN HEALTH HAZARDS

Continued From Page 4

VIII. HAZARD DESCRIPTION *(continued)*

☐ B. NON-WORKER INJURY/EXPOSURE

☐ C. WORKER INJURY/EXPOSURE

☐ D. CONTAMINATION OF WATER SUPPLY

☐ E. CONTAMINATION OF FOOD CHAIN

☐ F. CONTAMINATION OF GROUND WATER

☐ G. CONTAMINATION OF SURFACE WATER

Continue On Reverse

Continued From Front

VIII. HAZARD DESCRIPTION (continued)

☐ H. DAMAGE TO FLORA/FAUNA

☐ I. FISH KILL

☐ J. CONTAMINATION OF AIR

☐ K. NOTICEABLE ODORS

☐ L. CONTAMINATION OF SOIL

☐ M. PROPERTY DAMAGE

Continued From Page 6

VIII. HAZARD DESCRIPTION (continued)

☐ N. FIRE OR EXPLOSION

☐ O. SPILLS/LEAKING CONTAINERS/RUNOFF/STANDING LIQUID

☐ P. SEWER, STORM DRAIN PROBLEMS

☐ Q. EROSION PROBLEMS

☐ R. INADEQUATE SECURITY

☐ S. INCOMPATIBLE WASTES

VIII. HAZARD DESCRIPTION (continued)

☐ T. MIDNIGHT DUMPING

☐ U. OTHER (specify):

IX. POPULATION DIRECTLY AFFECTED BY SITE

A. LOCATION OF POPULATION	B. APPROX. NO. OF PEOPLE AFFECTED	C. APPROX. NO. OF PEOPLE AFFECTED WITHIN UNIT AREA	D. APPROX. NO. OF BUILDINGS AFFECTED	E. DISTANCE TO SITE (specify units)
1. IN RESIDENTIAL AREAS	1560	1560	500	<1 mile
2. IN COMMERCIAL OR INDUSTRIAL AREAS	2500	2500	30	<1 mile
3. IN PUBLICLY TRAVELLED AREAS	102,000	102,000	0	<1 mile
4. PUBLIC USE AREAS (parks, schools, etc.)	425	425	4	<0.5 miles

X. WATER AND HYDROLOGICAL DATA

A. DEPTH TO GROUNDWATER (specify unit)	B. DIRECTION OF FLOW	C. GROUNDWATER USE IN VICINITY
5-30ft;250-310ft;200-280ft*	SE(shallow),SW(Chicot),NW(Evangeline)	Industrial,Drinking
D. POTENTIAL YIELD OF AQUIFER	**E. DISTANCE TO DRINKING WATER SUPPLY (specify unit of measure)**	**F. DIRECTION TO DRINKING WATER SUPPLY**
0-2000 gpm;0-2500 gpm	4.5 miles	North

G. TYPE OF DRINKING WATER SUPPLY

☐ 1. NON-COMMUNITY < 15 CONNECTIONS ☒ 2. COMMUNITY (specify town): > 15 CONNECTIONS Houston, Texas

☐ 3. SURFACE WATER ☒ 4. WELL #LJ 65-15-510

*First range for saturated zone depth, second values for static water levels in Chicot aquifer wells, and third range for static levels in Evangeline wells.

**Initial range is gallons per minute (gpm) yield from Chicot wells (potential), and the final range is the same for the Evangeline aquifer.

Continued From Page 8

X. WATER AND HYDROLOGICAL DATA (continued)

H. LIST ALL DRINKING WATER WELLS WITHIN A 1/4 MILE RADIUS OF SITE

ALL WELLS	2. DEPTH (specify unit)	3. LOCATION (proximity to population/buildings)	4. NON-COMMUNITY (mark 'X')	5. COMMUNITY (mark 'X')
65-15-7C, 8A, 8B, 8F		on site (800-2500 feet deep)	X	
65-23-2C	1090 ft.	0.25 miles east	X	
65-15-8G	unknown	0.20 miles east	X	
65-15-809	to 812, 814,	824, 830, 831, 836 on site (depth 600-900 ft)	X	
*NOTE:	It is unknown which, if any, are used for drinking and which are industrial			

I. RECEIVING WATER

1. NAME Greens Bayou and Houston Ship Channel

☐ 2. SEWERS ☒ 3. STREAMS/RIVERS ☐ 4. LAKES/RESERVOIRS ☐ 5. OTHER (specify):

6. SPECIFY USE AND CLASSIFICATION OF RECEIVING WATERS

San Jacinto River Basin Segment #1006 not approved for any water uses except navigation.

XI. SOIL AND VEGITATION DATA

LOCATION OF SITE IS IN:

See attached map

☐ A. KNOWN FAULT ZONE ☐ B. KARST ZONE ☒ C. 100 YEAR FLOOD PLAIN ☐ D. WETLAND

☐ E. A REGULATED FLOODWAY ☐ F. CRITICAL HABITAT ☐ G. RECHARGE ZONE OR SOLE SOURCE AQUIFER

XII. TYPE OF GEOLOGICAL MATERIAL OBSERVED

Mark 'X' to indicate the type(s) of geological material observed and specify where necessary, the component parts.

'X'	A. OVERBURDEN	'X'	B. BEDROCK (specify below)	'X'	C. OTHER (specify below)
	1. SAND				
X	2. CLAY				
	3. GRAVEL				

XIII. SOIL PERMEABILITY

Urban land (75%) & Midland-Beaumont association of clays (25%) - original soils

☒ A. UNKNOWN ☐ B. VERY HIGH (100,000 to 1000 cm/sec.) ☐ C. HIGH (1000 to 10 cm/sec.)

☐ D. MODERATE (10 to .1 cm/sec.) ☐ E. LOW (.1 to .001 cm/sec.) ☒ F. VERY LOW (.001 to .00001 cm/sec.) $\times 10^{-5}$ cm/sec

G. RECHARGE AREA

☐ 1. YES ☒ 2. NO 3. COMMENTS:

H. DISCHARGE AREA

☐ 1. YES ☒ 2. NO 3. COMMENTS:

I. SLOPE

1. ESTIMATE % OF SLOPE: 0-1%

2. SPECIFY DIRECTION OF SLOPE, CONDITION OF SLOPE, ETC.: South to southeast; some northeast toward Greens Bayou

J. OTHER GEOLOGICAL DATA

(See attached hydrogeologic table for the following discussion)

The outcropping stratigraphic unit at the site, the Beaumont Clay Formation makes up most of the 'upper' Chicot aquifer with about 200 feet of sands and clays. A more significant aquifer, the 'lower' unit of the Chicot (See Attachment A)

Continued From Front

XIV. PERMIT INFORMATION

List all applicable permits held by the site and provide the related information.

A. PERMIT TYPE (e.g., RCRA, State, NPDES, etc.)	B. ISSUING AGENCY	C. PERMIT NUMBER	D. DATE ISSUED (mo., day, & yr.)	E. EXPIRATION DATE (mo., day, & yr.)	F. IN COMPLIANCE (mark 'X') 1. YES	2. NO	3. UNKNOWN
SW Registration	TDWR	30124			X		
Wastewater Disposal	TDWR	02549 00509	3/08/82 5/31/83		X		
UIC	TDWR	WDW90			X		
RCRA Part A	EPA	TXD000802959 TXD000802942			X		
Numerous Clean Air Act					X		
NPDES	EPA	TX0008524 TX0088404	10/14/82	10/13/87	X		

XV. PAST REGULATORY OR ENFORCEMENT ACTIONS

☐ NONE ☒ YES (summarize in this space)

ARMCO is a potential responsible party for the French Limited Site, currently undergoing cleanup by EPA.

NOTE: Based on the information in Sections III through XV, fill out the Tentative Disposition *(Section II)* information on the first page of this form.

RCRA 3012 SITE INSPECTION COMMENTS
ARMCO, INC.
HOUSTON, TEXAS
TX 05045

On May 15, 1984, Mr. David W. Dunn and Mr. Thomas J. Stang of Engineering-Science, Inc. (ES), representing the Texas Department of Water Resources (TDWR), conducted a site inspection at ARMCO, Inc.-Houston Works. ARMCO was represented by Mr. Bill Chadick, Environmental Coordinator, Mr. Bill Cody, Environmental Engineer, Mr. Joe Brown, Works Engineer, and Mr. Ron Thompson, Supervising Engineer. A three-hour meeting was held to discuss past and current disposal practices and to complete the standardized form. A 2.5 hour site inspection of the active and inactive hazardous waste areas was then conducted.

ARMCO, Inc.-Houston Works was a medium-sized producer of steel plate and large pipe. The facility closed production down in late 1983. Technical and supervising staff remain on-site to close out different areas of the plant and to comply with permits. The parent company intends to sell the site, either in sections or as a unit, and to do so it must maintain its environmental permits to allow for easy transfer to the purchaser.

The ARMCO facility includes 800 acres of steel production processes, raw material storage, and waste disposal areas. Large sections of the facility were closed down in the years preceding the final close-out. In addition, several waste-generating production processes were closed down 15-20 years ago. As a result, there are a large number of old production areas and structures. No attempt was made to discover undeclared waste disposal areas.

Description of Waste Areas

Five on-site disposal areas were visited during the inspection. These are discussed below:

West Pond - This site is the only listed active waste disposal area on-site. Technically, this facility is considered a 10 MG settling pond and not a hazardous waste facility by ARMCO. The pond received wastewater from all areas of the plant. In operation since 1965, the pond previously had been used to neutralize acid wastes. This practice was stopped when TDWR ruled this constituted hazardous waste treatment and requested registration of the pond. The pond had been drained prior to the inspection as part of the site close-down procedures. Some water, less than 20 percent of the total volume, remained in the deep end. Exposed sediment was black and appeared oily. The pond reportedly handled only non-hazardous waste and either recycled the water or discharged it through NPDES Outfall 001. Sediment from the pond was dredged and pumped to the Rod Mill Pond.

Rod Mill Pond - The Rod Mill Pond is a horseshoe-shaped above-grade (approximately 15 feet) impoundment used to settle out and store the solids from the West Pond. Sediment dredgings are pumped to the south side. Supernatant is withdrawn via an overflow block at the peak of the horseshoe. Secondary settling occurs in the north side of the pond with the clarified supernatant returned to the West Pond. The material settled in the south side was originally planned to be used as a raw material source, due to the high iron content.

Apparently the pond had not been used for some period of time. Very little water was present on the north side and the south side was completely filled (less than six inches of freeboard) with solids dry enough to walk on. Cattails covered most of the south side and several large areas apparently had ponded water on them recently. Surface texture ranged from dry and hard to moist and pliable. The north side was filled with vegetation of all types.

Coke Plant Acid Pit - This pit, located on the east end of the property near the coke plant, was used to store spent pickle liquor and tar decanter tank sludges. The pit was operated from 1954 to 1973 to dispose of acidic wastes generated by the coke plant. Approximately 11,235 cubic yards of material was disposed of in the natural clay lined, one acre site (400 feet X 80 feet). The site was closed-out under the supervision of ERM by mixing approximately 1,800 tons of cement flue dust with the acidic material and then covering with clay. No groundwater monitoring was reported. The site cap is currently about five feet above-grade. Inspection of the site showed minor erosion problems but no leachate springs or other problems. The cap is well-vegetated with some small trees on the edges.

East End Pit - The East End pit was used to dispose of miscellaneous wastes from the coke plant area. Leachate analysis tests conducted on the waste material indicated no potential problems as reported by ARMCO. The 100 foot X 60 foot pit was operated from 1976 to 1980, during which a total of approximately 2,000 cubic yards was disposed. Overflow from the pit reportedly ran to NPDES Outfall 11.

This site is apparently in a runoff drainage ditch for the plant. The pit was diked off using clay and the pit was filled. The stormwater runoff ditch passes directly behind the area, with the back side of the pit part of the ditch wall. Inspection of the area showed no apparent leachate springs. However, water in the ditch was extremely discolored, probably due to iron content.

Pipe Mill Acid Pond - The oldest disposal site at ARMCO was in use from 1950-1970 and was used to store pickle liquor. This site (50 feet X 100 feet) was a natural clay lined impoundment. Closure included off-site disposal of the liquid, lime neutralization of the 5,000 cubic yards of sludge remaining, and covering the site with dirt. No groundwater monitoring has been completed.

East End Pit - A sample was collected from the ditch behind the East End pit. This ditch may also include any influence from the coke plant acid pit. The water was discolored due to contamination. Analysis showed low metals concentrations and no pH problems.

Pipe Mill Acid Pit - A sample was taken from the stormwater ditch adjacent to the pit area. Analysis showed no metals contamination but a slightly elevated pH (8.9), probably not caused by the pit.

Analytical results are attached to this report.

Conclusions and Recommendations

ARMCO, Inc. has disposed a large quantity of potentially hazardous material on-site during its operaiton. Wastes are divided into five separate areas, with all but one currently inactive. Three have been closed out in the past 15 years. No apparent problems were noted. However, no groundwater monitoring has been conducted at any of the on-site disposal areas.

It is recommended that this metal site be given a low hazard ranking based on the large quantity of waste material disposed of in all the sites. This ranking may be lessened based on the efforts of the plant to treat the waste material and to properly close out the site. In addition, the population in the area is not large and the clay base is apparently a poor transfer pathway. Support for this ranking consists of incomplete testing of landfilled material, lack of groundwater monitoring, incomplete testing of the clay liner and waste treatment results, and the presence of the 100 year flood plain on-site.

ATTACHMENT A

POTENTIAL HAZARDOUS WASTE SITE
IDENTIFICATION AND PRELIMINARY ASSESSMENT SUPPLEMENT SHEET

Instruction - This sheet is provided to give additional information in explanation of a question on the form T2070-2.

Corresponding number on form	Additional Remark and/or Explanation
III. E. & III. F	ARMCO has used all the major hazardous waste disposal companies in the Houston area. Statewide is listed due to kiln dust disposal. Rollins is listed due to PCB transport.
V. A. 1	ARMCO considers all unclosed sites as active. This is an effort to improve the saleability of the property.
V. A. 2	Inactive sites include: 1) Pipe mill acid pit 2) Coke plant acid pit 3) East End pit
VI. 3. E	See Statewide Industrial Services (Hazsit #03981)

ATTACHMENT A

POTENTIAL HAZARDOUS WASTE SITE
SITE INSPECTION REPORT SUPPLEMENT SHEET

Instruction - This sheet is provided to give additional information in explanation of a question on the form T2070-3.

Corresponding number on form	Additional Remark and/or Explanation
XIII. J	composed of about 425 feet of sand, shale and clay from the Pleistocene age Montgomery Fmn., Bentley Fmn. and Willis Sand. The upper Pliocene creates the boundary for the hydrologic unit, the Evangeline. This aquifer; although deeper, is the most sought and utilized water-bearing zone in the Houston area. The Evangeline consists of nearly 2000 feet of sediments and rock of alluvial origin (sand, silt and clay). The Goliad Sand of the Pliocene and the uppermost Fleming Formation of the Miocene make up the stratigraphic components to the Evangeline. Beneath the Evangeline lie the Burkville confining layer which functions to retard the interchange of water between the Evangeline and Jasper aquifers. The Jasper is made up mainly of the Oakville Sandstone (not shown) also of Miocene age. The Jasper is not used much in the Houston area due to its great depth and, subsequently, mineralized waters. Pre-Miocene sediments are not worthy of discussion. As seen in the attached geologic section strata dip south and southeastward at increasingly greater angles due to increased overburden or sediment weight. A noticeable thickening of the younger strata results from sedimentation (deposition) at the time of subsidence from overburden pressures. Land subsidence in the Houston area is detailed by a recent study (TDWR Report 287, 1984) in which elevation drop at the site reached just over 9 total feet since 1906 (until 1978). Drop from 1973 until 1978 was from 0.75 to 1.0 feet. Subsidence is caused mostly by the dewatering of the clays (400 feet total clay thickness in the Chicot and 1250 total feet in the Evangeline). This process has resulted from the extreme and increasing withdrawal of groundwater to satisfy demand in Houston.

Pipe Mill Acid Pit

SURFACE IMPOUNDMENTS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. TYPE OF IMPOUNDMENT

Below grade acid pit

2. STABILITY/CONDITION OF EMBANKMENTS

Closed out

3. EVIDENCE OF SITE INSTABILITY *(Erosion, Settling, Sink Holes, etc.)*
☐ YES ☒ NO

4. EVIDENCE OF DISPOSAL OF IGNITABLE OR REACTIVE WASTE
☐ YES ☒ NO

5. ONLY COMPATIBLE WASTES ARE STORED OR DISPOSED OF IN THE IMPOUNDMENT
☒ YES ☐ NO

6. RECORDS CHECKED FOR CONTENTS AND LOCATION OF EACH SURFACE IMPOUNDMENT
☐ YES ☒ NO

7. IMPOUNDMENT HAS LINER SYSTEM
☐ YES ☒ NO Natural clay

7a. INTEGRITY OF LINER SYSTEM CHECKED
☐ YES ☒ NO

7b. FINDINGS

---

8. SOIL STRUCTURE AND SUBSTRUCTURE

Clay

9. MONITORING WELLS
☐ YES ☒ NO

10. LENGTH, WIDTH, AND DEPTH
LENGTH Unknown WIDTH Unknown DEPTH Unknown

11. CALCULATED VOLUMETRIC CAPACITY

5,000 cubic yards

12. PERCENT OF CAPACITY REMAINING

Closed out

13. ESTIMATE FREEBOARD

Closed out

14. SOLIDS DEPOSITION
☒ YES ☐ NO

15. DREDGING DISPOSAL METHOD

In place

16. OTHER EQUIPMENT

EPA Form T2070-3C (10-79)

Coke Plant Acid Pit

SURFACE IMPOUNDMENTS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. TYPE OF IMPOUNDMENT
Above and below grade acid pit

2. STABILITY/CONDITION OF EMBANKMENTS
Closed pit

3. EVIDENCE OF SITE INSTABILITY (Erosion, Settling, Sink Holes, etc.)
☐ YES ☒ NO

4. EVIDENCE OF DISPOSAL OF IGNITABLE OR REACTIVE WASTE
☐ YES ☐ NO

5. ONLY COMPATIBLE WASTES ARE STORED OR DISPOSED OF IN THE IMPOUNDMENT
☒ YES ☐ NO

6. RECORDS CHECKED FOR CONTENTS AND LOCATION OF EACH SURFACE IMPOUNDMENT
☐ YES ☒ NO

7. IMPOUNDMENT HAS LINER SYSTEM
☐ YES ☒ NO Natural clay

7a. INTEGRITY OF LINER SYSTEM CHECKED
☐ YES ☒ NO

7b. FINDINGS
NA

8. SOIL STRUCTURE AND SUBSTRUCTURE
Clay

9. MONITORING WELLS
☐ YES ☒ NO

10. LENGTH, WIDTH, AND DEPTH
LENGTH Unknown WIDTH Unknown DEPTH Unknown

11. CALCULATED VOLUMETRIC CAPACITY
11,235 cubic yards

12. PERCENT OF CAPACITY REMAINING
Closed out

13. ESTIMATE FREEBOARD
Closed out

14. SOLIDS DEPOSITION
☒ YES ☐ NO

15. DREDGING DISPOSAL METHOD
In place

16. OTHER EQUIPMENT

EPA Form T2070-3C (10-79)

West Pond

SURFACE IMPOUNDMENTS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. TYPE OF IMPOUNDMENT
Below grade impoundment

2. STABILITY/CONDITION OF EMBANKMENTS
Good

3. EVIDENCE OF SITE INSTABILITY (Erosion, Settling, Sink Holes, etc.)
☐ YES ☒ NO

4. EVIDENCE OF DISPOSAL OF IGNITABLE OR REACTIVE WASTE
☐ YES ☒ NO

5. ONLY COMPATIBLE WASTES ARE STORED OR DISPOSED OF IN THE IMPOUNDMENT
☒ YES ☐ NO

6. RECORDS CHECKED FOR CONTENTS AND LOCATION OF EACH SURFACE IMPOUNDMENT
☐ YES ☒ NO

7. IMPOUNDMENT HAS LINER SYSTEM
☐ YES ☒ NO Natural clay

7a. INTEGRITY OF LINER SYSTEM CHECKED
☐ YES ☒ NO

7b. FINDINGS
NA

8. SOIL STRUCTURE AND SUBSTRUCTURE
Clay

9. MONITORING WELLS
☐ YES ☒ NO

10. LENGTH, WIDTH, AND DEPTH
LENGTH Unknown WIDTH Unknown DEPTH Unknown

11. CALCULATED VOLUMETRIC CAPACITY
10 M gallon

12. PERCENT OF CAPACITY REMAINING
80% (mill is not operating)

13. ESTIMATE FREEBOARD
10 feet

14. SOLIDS DEPOSITION
☒ YES ☐ NO

15. DREDGING DISPOSAL METHOD
Placed into Rod Mill Pond

16. OTHER EQUIPMENT

STORAGE FACILITIES SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

STORAGE AREA HAS CONTINUOUS IMPERVIOUS BASE
[X] YES [ ] NO Concrete

STORAGE AREA HAS A CONFINEMENT STRUCTURE
[X] YES [ ] NO Sumps (drum storage)

EVIDENCE OF LEAKAGE/OVERFLOW *(If "Yes", document where and how much runoff is overflowing or leaking from containment)*
[ ] YES [X] NO

ESTIMATE TYPE AND NUMBER OF BARRELS/CONTAINERS
Previously, up to 70 drums were stored

GLASS OR PLASTIC STORAGE CONTAINERS USED
[ ] YES [X] NO

ESTIMATE NUMBER AND CAPACITY OF STORAGE TANKS
4 process tanks 3 roll-off boxes 30/20/20 cubic yards

NOTE LABELING ON CONTAINERS
Unknown

EVIDENCE OF LEAKAGE CORROSION OR BULGING OF BARRELS/CONTAINERS/STORAGE TANKS *(If "Yes", document evidence. Describe location and extent of damage. Take PHOTOGRAPHS)*
[ ] YES [ ] NO

Unknown

DIRECT VENTING OF STORAGE TANKS
[X] YES [ ] NO Open tops

CONTAINERS HOLDING INCOMPATIBLE SUBSTANCES *(If "Yes", document evidence. Describe location and identity of hazardous waste. Take PHOTOGRAPHS)*
[ ] YES [X] NO

INCOMPATIBLE SUBSTANCES STORED IN CLOSE PROXIMITY *(If "Yes", document evidence. Describe location and identity of hazardous waste. Take PHOTOGRAPHS)*
[ ] YES [X] NO

ADEQUATE CONTAINER WASHING AND REUSE PRACTICES
[ ] YES [X] NO No container reuse

ADEQUATE PRACTICES FOR DISPOSAL OF EMPTY STORAGE CONTAINERS

Rod Mill Pond

SURFACE IMPOUNDMENTS SITE INSPECTION REPORT
(Supplemental Report)

INSTRUCTION
Answer and Explain as Necessary.

1. TYPE OF IMPOUNDMENT
Above grade impoundment

2. STABILITY/CONDITION OF EMBANKMENTS
Good

3. EVIDENCE OF SITE INSTABILITY (Erosion, Settling, Sink Holes, etc.)
☐ YES ☒ NO

4. EVIDENCE OF DISPOSAL OF IGNITABLE OR REACTIVE WASTE
☐ YES ☒ NO

5. ONLY COMPATIBLE WASTES ARE STORED OR DISPOSED OF IN THE IMPOUNDMENT
☒ YES ☐ NO

6. RECORDS CHECKED FOR CONTENTS AND LOCATION OF EACH SURFACE IMPOUNDMENT
☐ YES ☒ NO

7. IMPOUNDMENT HAS LINER SYSTEM
☐ YES ☒ NO Natural clay

7a. INTEGRITY OF LINER SYSTEM CHECKED
☐ YES ☒ NO

7b. FINDINGS
NA

8. SOIL STRUCTURE AND SUBSTRUCTURE
Clay

9. MONITORING WELLS
☐ YES ☒ NO

10. LENGTH, WIDTH, AND DEPTH
LENGTH 400 WIDTH 125 DEPTH 15

11. CALCULATED VOLUMETRIC CAPACITY
750,000 cubic feet

12. PERCENT OF CAPACITY REMAINING
250,000 cubic feet

13. ESTIMATE FREEBOARD
10 feet

14. SOLIDS DEPOSITION
☒ YES ☐ NO

15. DREDGING DISPOSAL METHOD
In place

16. OTHER EQUIPMENT
Comment:
The Rod Mill Pond was in a horseshoe-shape with a barrier at the peak to allow solids to separate and settle on the south side and provide a polishing volume on the north side.

Ref. # 11

C (list Generators
(attach to correct checklist)

Date March 15, 1984

Reg./Permit No. 30124

INDUSTRIAL SOLID WASTE

Compliance Monitoring Inspection Report

COMMENTS SHEET

SECTION: D Paragraph: 14

Drum reclaimation area is a concrete curbed area which slopes to a sump. Drums of spent solvents, waste lube oils, grease and empty drums are stored in this area.

PCB's are stored inside a building, on a concrete slab with a 6" curb, fenced and locked with proper signs. All wastes have been shipped off-site.

SECTION: Paragraph:

SECTION: Paragraph:

MAJOR

TEXAS DEPARTMENT OF WATER RESOURCES
Industrial Solid Waste Disposal Compliance Monitoring Inspection

Inspection Cover Sheet (see reverse side for checklist use and general instructions)

Compliant _____

Noncompliant ✓

Texas Permit/Reg. No. 30124

EPA I.D. No. TXD008802942
Landfill: TXD008802959

Site Operator Information:

Name of Company Armco Inc.

Company's Address P.O. Box 96120

Houston, Tx 77013 Phone No. (713)960-5111

Site Address 13100 Industrial Rd.

Landfill: 12527 Greens Bayou Dr. Phone No. same as above County Harris

Type of Industry Integrated steel mill; steel pipe fabrication

Indicate below Classes of Waste managed (Hazardous-H, Class I nonhazardous-NH, Class II-III)

Generator H, NH, II Transporter _____ Small Quantity Generator _____

Treatment NH Disposal H Storage H, NH, II; 90 Day Exemption _____

Site Information (T.S.D. facilities only)

1. Are facilities located outside the 100 year flood plain area? no
2. Describe land use within one mile Industrial, commercial, residential
3. Closed or abandoned facilities yes - see comments

Inspection Information:

1. Inspector's Name & Title Sandra Parker, field representative
2. Inspection Date March 15, 1984
3. Inspection Participants Bill Chadick, Senior Environmental Engineer
(450-8562) Joe Brown, P.E. Works Engineer (450-8561) (home: 464-2240)
Ronald Thompson, P.E. Supvg. Project Engineer-Environmental Corporate Engineering
(513) 425-2841

Approved: Merton J Coloton Signed: Sandra A. Parker
District Supervisor Inspector

Date: March 22, 1984

Revised 12/1/82 - FFY 1983

COMPLIANCE MONITORING INSPECTION REPORT
Generators Checklist

Section A - Hazardous Waste Determination 335.6(e) and 335.62

1. A determination has been made that the solid waste(s) generated is either hazardous or non-hazardous. Yes ✓ No ___

2. If the answer to #1 is yes, check the method used for determination:

   a. Listed as a hazardous waste in Title 40 CFR Part 261, Subpart D ✓. K061, K062

   b. Process or materials knowledge ✓.

   c. Tested for characteristics as identified in Title 40 CFR Part 261, Subpart C ✓. (If equivalent test method used, attach a copy)

3. The following wastes, if generated, have been tested to determine nonhazardous characteristics:

   a. Class I nonhazardous — Yes ✓ No ___ N/A ___

   b. Class II — Yes ✓ No ___ N/A ___

   c. PCB (storage) — Yes ✓ No ___ N/A ___

   If no, list on the comments sheet those wastes deemed nonhazardous or processes from which non-hazardous waste was produced.

4. Notification of waste stream changes are current. See attached registration for updates — Yes ___ No ✓ N/A ___

Section B - Special Conditions 335.75

1. If a generator has received from or transported to a foreign source any hazardous waste, the appropriate notice has been filed with the Regional Administrator (EPA requirement only). Yes ___ No ___ N/A ✓

2. Waste was manifested and signed by foreign consignee. Yes ___ No ___ N/A ✓

3. Confirmation of waste transported out of the country has been received by the generator. Yes ___ No ___ N/A ✓

Section C - Record Keeping and Reports 335.9 and 335.70-.72

1. Generator maintains the required records and reports for 3 years. Yes ✓ No ___

   ✓ At the facility

   ___ Elsewhere (note location in comments sheet)

2. Disposal methods described in the registration agree with actual situation [335.6(b)]. deletion incinerator, landfarm Yes ___ No ✓

3. Spills or unauthorized discharges are reported as required (335.453). Yes ___ No ___ N/A ✓

DO NOT COMPLETE SECTION D IF GENERATOR DISPOSES OF HAZARDOUS AND/OR NONHAZARDOUS WASTE ON-SITE ONLY.

Section D - Pretransport and Manifest Requirements 335.65-.69

(According to Bill Chadick, Joe Brown Name, Owner/Operator, Manager)

1. Identify primary off-site disposal facility(s). Use comments sheet or add registration waste list properly annotated.

2. TDWR manifest shipping control ticket is properly completed. Yes ✓ No ___ N/A ___

3. Generator receives return (white) copy of shipping control ticket. Yes ✓ No ___ N/A ___

4. Generator is familiar with DOT packaging requirements identified in Title 49 CFR Parts 173, 178 and 179. Yes ✓ No ___

5. Containers used to temporarily store waste before transport meet the DOT packaging requirements of Title 49 CFR Parts 173, 178 and 179. Yes ✓ No ___

6. Generator labels and marks each package in accordance with Title 49 CFR Part 172. Yes ✓ No ___

7. Each container of 110 gallons or less is marked with the required hazardous waste warning label. Yes ___ No ___ N/A ✓
   All drums of this had been disposed of during inspection

8. If hazardous wastes are accumulated for more than 90 days, the generator (is/will be) a permitted storage facility. Yes ✓ No ___ N/A ___

9. Generator inspects containers for leakage or corrosion at least weekly (335.245). Yes ✓ No ___

10. If leaking or bulging container is found, operator transfers waste into a usable container properly lined not to react with the waste. Yes ___ No ___ N/A ✓

11. Generator locates containers holding ignitable or reactive waste at least 15 meters (50 feet) from the facility's property line (335.246). Yes ✓ No ___ N/A ___

12. Containers holding incompatible wastes are kept apart by physical barrier or sufficient distance (335.118). Yes ✓ No ___ N/A ___

NOTE: If tanks are used, complete checklist for tanks.

13. Storage area has containment protection as set forth in Title 40 CFR Part 264.175, Use and Management of Containers. Yes ✓ No[1] ___

NOTE 1: This will be a future permit requirement.

14. Describe drum or container storage area. Use photos and/or comments sheet. See comments

COMPLIANCE MONITORING INSPECTION REPORT
Facilities Checklist
TAC 335.111-.118

Section A - General Facility Standards

1. Proof of deed recordation of on-site disposal facilities has been provided to the agency. Yes ✓ No ___ N/A ___

2. A sketch of facilities, general site orientation showing landfills, surface impoundments, injection wells, drainage routes, water bodies/courses and other pertinent features (separate sketch or diagram of landfill(s) etc.) should be attached to this and other facility checklist(s).

NOTE: For all nonhazardous, noncommercial facilities do not complete the remainder of this Facilities Checklist. Proceed to specific type facility checklists and complete one checklist for each disposal facility or multi-comments on a single checklist. See comments

Section B - Waste Analysis 335.114

1. Facility has a waste analysis plan. Yes ✓ No ___

2. Waste plan is maintained at the facility. Yes ✓ No ___

3. Waste plan includes the following:

   a. Parameters for which each waste will be analyzed. Yes ✓ No ___

   b. Test methods used to test for these parameters. Yes ✓ No ___

   c. Sampling method used to obtain sample. Yes ✓ No ___

   d. Frequency with which the initial analysis will be reviewed or repeated. Yes ✓ No ___

      NOTE: Frequency includes requirement to repeat whenever waste stream or process(es) is changed.

   *e. Waste analyses that generators have agreed to supply. Yes ___ No ___ N/A ✓

   *f. Procedures which are used to inspect and analyze each movement of hazardous waste including:

      (1) Procedures to be used to determine the identity of each movement of waste. Yes ___ No ___ N/A ✓

      (2) Sampling method to be used to obtain representative sample of the waste to be identified. Yes ___ No ___ N/A ✓

*Note: Applies to off-site commercial facilities only

4. The facility provides adequate security (335.115). Yes ✓ No ___

a. ___ 24-hour surveillance system (e.g. television monitoring or guards).

OR

b. ✓ Artificial or natural barrier around facility (e.g. fence or fence and cliff).

Describe fence around plant and part of landfill is fenced.

c. ___ Means to control entry through entrances (e.g. attendant, television monitors, locked entrance, controlled roadway access).

Describe _____

5. Facility has a sign with the legend "Danger - Unauthorized Personnel Keep Out". at landfill Yes ✓ No ___ N/A ___

Section C - General Inspection Requirements 335.116

1. Facility has a written inspection schedule (and plan). Yes ✓ No ___

✓ Plan is maintained at the facility
___ Elsewhere (note location in comments sheet)

2. Inspection schedule (plan) provides for inspecting the following:

a. Monitoring equipment. Yes ✓ No ___

b. Safety and emergency equipment. Yes ✓ No ___

c. Security devices. Yes ✓ No ___

d. Operating and structural equipment. Yes ✓ No ___

3. Schedule or plan identifies the types of problems to be looked for during inspection:

a. Malfunctions and deterioration. Yes ✓ No ___

b. Operator error. Yes ✓ No ___

c. Discharge or threat of discharge. Yes ✓ No ___

4. The owner/operator maintains an inspection log which includes:

a. Date and time of inspection. Yes ✓ No ___

b. Name of inspector. Yes ✓ No ___

c. Notation of observations. Yes ✓ No ___

d. Date and nature of repairs or remedial action. Yes ✓ No ___

5. Malfunctions or other deficiencies noted in the inspection log have been rectified. Yes ✓ No ___ N/A ___

6. Inspection log records are maintained for 3 years. Yes ✓ No ___

Section D - Personnel Training 335.117

1. Owner/operator maintains Personnel Training Records at the facility. Yes ✓ No ___

2. Personnel Training Records include:

a. Job Title and written job description of each position. Yes ✓ No ___

b. Description of type and amount of training. Yes ✓ No ___

c. Records of training given to facility personnel. Yes ✓ No ___

3. Personnel Training Records are maintained for the appropriate length of time. Yes ✓ No ___

Section E - Requirements for Ignitable, Reactive or Incompatible Waste 335.118

1. Owner/operator is familiar with proper separation and safeguards needed to prevent ignition or reaction of ignitable or reactive waste. Yes ✓ No ___

a. Use comments sheet to describe separation and confinement procedures. Separate storage areas.

b. Use comments sheet to describe any potential sources of ignition or reaction.

2. Smoking and open flame are confined to specifically designated locations. Yes ✓ No ___

3. "No Smoking" signs are posted in hazardous areas. Yes ✓ No ___

Section F - Preparedness and Prevention 335.131-.137

1. Describe any evidence of fire, explosion, or contamination of the environment in the comments sheet.

2. Facility is equipped with:

   a. Internal communication or alarm system within easy access. Yes ✓ No ___ N/A ___

   b. Telephone or two-way radio to call emergency response personnel. Yes ✓ No ___ N/A ___

   c. Portable fire extinguishers, fire control equipment, spill control equipment and decontamination equipment tested regularly to assure proper operation. Yes ✓ No ___ N/A ___

   d. Water volume adequate for hoses, sprinklers or water spray system. Can use water from West Pond, wells, city water. Yes ✓ No ___ N/A ___

3. Aisle space is sufficient to allow unobstructed movement of personnel and equipment. Yes ✓ No ___ N/A ___

4. Owner/operator has attempted to make arrangements with the local response authorities to familiarize them with the layout of the facility, properties of hazardous waste handled and associated hazards, places where facility personnel would normally be working, entrances to roads inside facility, and possible evacuation routes. Yes ✓ No ___ N/A ___

5. In the case that more than one police and fire department might respond, a primary authority has been designated. CIMA Yes ✓ No ___ N/A ___

6. Owner/operator has attempted to make agreements with State emergency response teams, emergency response contractors and equipment suppliers. Yes ✓ No ___ N/A ___

7. Owner/operator has attempted to make arrangements with local hospitals to familiarize them with the properties of hazardous waste handled and types of injuries that could result from fires, explosions, or releases at the facility. Yes ✓ No ___ N/A ___

8. State or local authorities have entered into the necessary arrangements. Yes ___ No ___ N/A ✓

Section G - Contingency Plan and Emergency Procedures 335.151-.157

1. A contingency plan is maintained at the facility. Yes ✓ No ___

2. Contingency plan is:
   a. a revised SPCC Plan ___
   b. a separate document ✓
   c. adequate to meet emergency procedures requirements Yes ✓ No ___

3. Emergency coordinator is on-site or on call at all times. Yes ✓ No ___

Section H - Manifest System, Recordkeeping and Reporting 335.171-.177

1. Owner/operator complies with manifest requirements. Yes ✓ No ___ N/A ___

   NOTE: If 1 is N/A, go to question 6 below.

2. Waste received from a rail or water (bulk shipment) transporter are accompanied by a properly executed shipping paper. Yes ___ No ___ N/A ✓

3. All shipments of waste received have been consistent with the manifest. Yes ___ No ___ N/A

4. Unmanifested waste was reported to the Executive Director [335.15(b)]. Yes ___ No ___ N/A ✓

5. Discrepancies have been reconciled with the generator and transporter. Yes ___ No ___ N/A ✓

6. Owner/operator keeps a written operating record at the facility. Yes ✓ No ___

7. Operating record reflects the following:

   a. Description, quantity of each hazardous waste received and method(s) and date of T.S.D. at the facility. Yes ✓ No ___

   b. Location and quantity of each hazardous waste within the facility (for disposal facilities, quantity on a map or diagram of each cell or disposal area, for all facilities cross-reference to shipping ticket Nos.). Yes ✓ No ___

   c. Records and results of waste analyses and trial tests. Yes ✓ No ___

   d. Summary Reports of all incidents that require implementing the contingency plan. Yes ___ No ___ N/A

   e. Closure cost estimates for all facilities (335.232). Yes ✓ No ___

   f. Post closure cost estimates for disposal facilities (335.233). Yes ✓ No ___ N/A ___

8. Owner/operator maintains an adequate closure plan for all facilities. Yes ✓ No ___ N/A ___

9. Owner/operator maintains an adequate post closure plan for disposal facilities. Yes ✓ No ___ N/A ___

10. If the owner/operator is required to furnish financial assurance (owner/operator of a hazardous waste treatment, storage or disposal facility),

What is the estimated closure cost?

$ 1,931,828

What is the estimated post closure cost?

$ 362,223

11. Closure (and post closure) costs are adjusted for inflation on an annual basis. Yes ✓ No ___

12. Owner/operator established financial assurance for "current" closure (and post closure) cost(s) with TDWR by July 6, 1982. Yes ___ No ✓

a. If no, but financial assurance was established at a later date, specify when:

March 15, 1983

b. Specify the method(s) of assurance of financial responsibility for these costs:

Financial Test

13. The closure and post closure costs appear to adequately meet the estimates for the most expensive point in a facilities operating life (see also page 27 of the Group II checklist.). Yes ✓ No ___

Liability Coverage Requirements
40 CFR 265.147

1. Facility owner/operator had sudden accidental coverage (1 million per occurrence with annual aggregate of 2 million) demonstrated by July 15, 1982. Yes ✓ No ___ N/A ___

a. If no, but sudden coverage was established at a later date, specify when: See attached.

b. Specify the method(s) of liability coverage

✓ Liability insurance 1 million. / 2 million aggregate
(amount)

__ Financial test _____.
(amount)

__ Combination _____.
(amount)

Coverage for Non-Sudden Accidental Occurrence

1. Date by which coverage must be demonstrated (check one).

a. ✓ Jan. 16, 1983 (sales or revenues totaling $10 million or more)

*b. ____ Jan. 16, 1984 (sales or revenues greater than $5 million but less than $10 million)

*c. ____ Jan. 16, 1985 (all other owners or operators)

*NOTE: If coverage for non-sudden accidental occurrence is not in place, a letter of intent must be sent to the Executive Director by January 16, 1983 stating the date the owner or operator plans to have the necessary coverage.

2. A letter of intent to the Executive Director has been sent stating the date the owner or operator plans to have coverage. Yes__ No__ N/A ✓

3. Facility owner has demonstrated financial responsibility for bodily and property damage to third parties caused by non-sudden accidental occurences by the required date (3 million per occurrence; 6 million annual aggregate). Yes ✓ No__ N/A__

4. Specify method of liability coverage:

__ Liability insurance _____.
(Amount)

✓ Financial test 3 mill / 6 mill aggregate.
(Amount)

__ Combination _____.
(Amount)

Checklist facilities
(at h to correct checklist)

Date March 15, 1984

Reg./Permit No. 30124

INDUSTRIAL SOLID WASTE

Compliance Monitoring Inspection Report

COMMENTS SHEET

SECTION: A Paragraph:

Armco has closed its steel mill operations; however they have not notified IDWR of the shutdown. At the time of the inspection, Armco was still making shipments of electric furnace dust (K061) to their Greens Bayou Landfill. MR. Joe Brown stated that they would be finished with the

SECTION: Paragraph:

removal or "clean-up" of the K061 from plant areas and dispose of in the landfill by next week. Armco wanted clarification on how often shipments should be made to the landfill in order to consider it an "active" site. Armco feels they may have a buyer for the mill and wants to prolong beginning closure activities for as long

SECTION: Paragraph:

as possible.

The other facilities at the plant site itself include a (HW) Drum storage area, (NH) WEST POND, (NH) WIDE FLANGE mound. 2 waste oil tanks (12,000 gallons each) (#) process tanks for copper coating solution.

Checklist facilities
(at h to correct checklist)

Date March 15, 1984

Reg./Permit No. 30,24

INDUSTRIAL SOLID WASTE

Compliance Monitoring Inspection Report

COMMENTS SHEET

SECTION: _____ Paragraph: _____

The closed facilities include the Rod Mill Pond, Coke Plant acid pit, pipe mill acid pit, coke plant east acid pit See attached description of closed facilities. According to Armco personnel all of the above facilities were closed prior to RCRA.

SECTION: _____ Paragraph: _____

Please see inspection of July & August 1982 for checklists regarding all inactive facilities and for the West Pond & tank (oil storage).

Slides of these facilities will be forwarded when processed.

SECTION: _____ Paragraph: _____

C (list Generators
(attach to correct checklist)

Date March 15, 1984

Reg./Permit No. 30124

INDUSTRIAL SOLID WASTE

Compliance Monitoring Inspection Report

COMMENTS SHEET

SECTION: D Paragraph: 14

Drum reclaimation area is a concrete curbed area which slopes to a sump. Drums of spent solvents, waste lube oils, grease and empty drums are stored in this area

PCB's are stored inside a building, on a concrete slab with a 6" curb, fenced and locked with proper signs. All wastes have been shipped off-site.

SECTION: Paragraph:

SECTION: Paragraph:

INDUSTRIAL SOLID WASTE

*Closure and Post-Closure Compliance Review Checklist
(TAC Section 335.211-.220

amending closure plan

**

Note: List each type of hazardous waste T, S, D facility, number and volume in the comments sheet.

I. CLOSURE PLAN; Is there a written plan? Yes ✓ No___

1. Does the plan identify the *MAXIMUM EXTENT OF OPERATION which will be unclosed during the life of the facility? entire landfill site at Earlens Bayou unclosed. Yes ✓ No___

*Note: The rules [335.213(a)(1)] require that the closure plans identify the maximum extent of the operation which will be unclosed during the life of the facility. If the plan is based on the expected extent of operations to be closed just prior to closure, it is important to consider whether that represents the "maximum" in this question.

2. Does the plan identify the steps for PARTIAL and/or COMPLETE CLOSURE [335.213(a)], at any time during the intended operating life, of

a. surface impoundments? N/A ✓ Yes___ No___

b. landfills? N/A___ Yes ✓ No___

c. tanks? N/A ✓ Yes___ No___

d. other (specify: drum storage) Yes___ No___

3. Is there an estimate of the MAXIMUM INVENTORY of wastes in storage or treatment at any time during the life of the facility? N/A___ Yes ✓ No___

4. Does the plan clearly identify the STEPS TO CLOSE [335.213(a)]?

a. at any point during the intended operating life? Yes ✓ No___

b. at the end of the intended operating life? Yes ✓ No___

*(Changed 10/13/83, added question to I above; this checklist is for use with "Part A" permit applicants that have not submitted "Part B" application)
**This response column indicates noncompliance.

**

5. Are the following STEPS TO CLOSE included in the plan:

a.	removal of wastes [335.214(a)]?	N/A___	Yes ✓	No___
b.	treatment of wastes [335.214(a)]?	N/A___	Yes ✓	No___
c.	waste disposal [335.214(a)]?	N/A___	Yes ✓	No___
d.	cover [335.344(a)]?	N/A___	Yes ✓	No___
e.	decontamination of equipment and structures [335.213(a)(3)]?	N/A___	Yes ✓	No___
f.	closure certification [335.216]?	N/A___	Yes ✓	No___

6. Does the plan describe the DECONTAMINATION [335.213(a)(3)] of facility equipment and structures? N/A___ Yes ✓ No___

7. With respect to CERTIFICATION of closure (335.216), does the closure plan describe scheduled or estimated number of inspections? Yes ✓ No___
One inspection.

8. Does the plan identify the YEAR when closure is expected to occur [335.213(a)(4)]? Should be. Year 1991 Yes ✓ No___
ammended since facility is currently closed.

9. Is there a SCHEDULE for final closure activities [335.213(a)(4)]? Yes ✓ No___

10. Closure plan evaluated Apr 1/24 (date): Adequate Yes ✓ No___

COMMENTS

The Armco facility has been officially closed however the company has not submitted a closure plan as required. Since the year of closure has changed, this along with operating changes, the plan should be amended as required.

*(Changed 10/13/83, added checklist question No. 10)
**This response column indicates noncompliance.

*(Changed 10/13/83, added checklist for use with "Part A" permit applicants that have not submitted "Part B" application)
**This response column indicates noncompliance.

**

II. POST-CLOSURE PLAN CHECKLIST; Is there a written plan? *N/A___ Yes ✓ No___

*Note: If no post-closure required, proceed to Cost Estimate Checklist.

1. Does the post-closure plan provide for 30 years of post-closure care? N/A___ Yes ✓ No___

   · How many years of post-closure care? _____

2. Does the plan clearly identify the ACTIVITIES required in the post-closure care? Yes ✓ No___

3. Do the MAINTENANCE PLANS for waste containment structures [335.218(a)(2)] include:

   a. maintaining final cover (erosion damage repair) frequencies [335.344(d)(1)]? Yes ✓ No___

   b. vegetation and fertilizing frequencies [335.218(a)(2)(A)]? Yes ✓ No___

   c. collecting, removing, and treating leachate activities [335.344(d)(2)]? N/A ✓ Yes___ No___

   d. ~~collecting, removing, and treating leachate frequencies [335.344(d)(2)]~~? N/A___ Yes___ No___

   e. gas collection activities [335.344(d)(3)]? N/A ✓ Yes___ No___

   f. ~~gas collection frequencies [335.344(d)(3)]~~? N/A___ Yes___ No___

4. Do MONITORING EQUIPMENT MAINTENANCE plans [335.218(a)(2)(B)] include:

   a. activities? Yes ✓ No___

   b. frequencies? Yes ✓ No___

5. Does the plan identify the name, address and phone number of the POST-CLOSURE PERIOD CONTACT [335.218(a)(3)]? Yes ✓ No___

*(Changed 10/13/82; added checklist for use with "Part A" permit applicants that have not submitted "Part B" application)
**This response column indicates noncompliance.

				**
6.	For landfills, does the post-closure plan address the following objectives and indicate how they will be achieved [335.344(b)]?			
	a. Control of pollution migration via ground water, surface water, and air.	N/A___	Yes ✓	No___
	b. Control of surface water infiltration, including prevention of pooling.	N/A___	Yes ✓	No___
	c. Prevention of erosion.	N/A___	Yes ✓	No___
7.	For land treatment operations, does the post-closure plan address the following objectives and indicate how they will be achieved [335.327(a)]?			
	a. Control of migration of hazardous wastes and constituents into the ground water.	N/A ✓	Yes___	No___
	b. Control of the release of contaminated runoff into surface water.	N/A ✓	Yes___	No___
	c. Control of the release of airborne particulate contaminants caused by wind erosion.	N/A ✓	Yes___	No___
	d. Protection of food chain crops.	N/A ✓	Yes___	No___
8.	For landfills and land treatment operations, does the post-closure plan include at least a narrative statement indicating that the following factors were considered in addressing the closure objectives [335.327(b), 335.344(b)]?			
	a. Type and amount of waste.	N/A___	Yes ✓	No___
	b. Mobility and rate of migration.	N/A___	Yes ✓	No___
	c. Site location, topography, and surrounding land use.	N/A___	Yes___	No ✓
	d. Climate, including precipitation.	N/A___	Yes___	No ✓
	e. Characteristics of the cover, including material, final surface contour, thickness, porosity, permeability, slope, vegetation.	N/A___	Yes ✓	No___

*(Changed 9/30/82, added checklist for use with "Part A" permit applicants that have not submitted "Part B" application)
**This response column indicates noncompliance.

**

f. Geological and soil profiles and surface and subsurface hydrology. N/A ✓ Yes___ No___

g. Unsaturated zone monitoring. N/A ✓ Yes___ No___

h. Type, concentration, and depth of hazardous constituent migration as compared to background concentrations. N/A ✓ Yes___ No___

9. Does the plan address the requirement for notice to the local land authority (335.219)? Yes ✓ No___

10. Does the plan address the requirement for notice in the deed (335.220)? Yes ✓ No___

11. Post closure plan evaluated Apr 14 (Date) : Adequate Yes___ No ✓

COMMENTS

See deficiency letter for non-compliances.

*(Changed 10/13/83; added checklist for use with "Part A" permit applicants that have not submitted "Part B" application)
**This response column indicates noncompliance.

**

III. COST ESTIMATE; Evaluated: April 24 (date) N/A___ Yes___ No___

1. Is there a written closure cost estimate [335.232(a)] (Supp. 14 of Group I for estimated cost? Yes ✓ No___

2. Is the closure cost estimate adequate to cover all required closure activities [335.232(a)]? Yes___ No ✓

   If "No", specify in comments.

3. Is there a written post-closure cost estimate [335.233(a)]? N/A___ Yes ✓ No___

4. Is the annual estimate multiplied by 30 to cover the entire post-closure care period [335.233(b)]? Yes ✓ No___

   or number of years ___

5. Is the cost estimate adequate to cover all the activities in the post-closure plan [335.218(a)]? Yes ✓ No ✓

   Including labor costs? Yes___ No ✓

   As well as the requirements of notice to local land authorities and in deeds (335.219 and .220)? Yes___ No___

COMMENTS

Closure cost did not include the closure certification costs

TDWR-
Page 30 of 30 of Group II
*(Changed 10/13/83, added checklist for use with "Part A" permit applicants that have not submitted "Part B" application)
**This response column indicates noncompliance.

Ch list _____
(attach to correct checklist)

Date _____

Reg./Permit No. _____

INDUSTRIAL SOLID WASTE

Compliance Monitoring Inspection Report

COMMENTS SHEET

SECTION: _____ Paragraph: _____

SECTION: _____ Paragraph: _____

SECTION: _____ Paragraph: _____

INDUSTRIAL SOLID WASTE

Compliance Monitoring Inspection Report
Ground Water Monitoring Program (335.191-.195)

1. Ground Water Monitoring Status:
Detection _____ : quarterly sampling _____ ; semi annual sampling _____
Alternate Aug 4, 1983 (date approved) Waiver _____ (date approved)
Assessment _____ (date approved) Required but not monitoring _____
Arnco has drilled 3 new downgradient wells & is re-doing 1st year sampling. See attached alternate plan.

	Yes	No	Not Applicable
2. Has the following been installed in the uppermost aquifer around the waste management area(s):			
At least one hydraulically upgradient well?	✓		
At least three hydraulically downgradient wells?	✓		
3. If the waste management area includes multiple waste management facilities, is each facility adequately monitored?			✓
4. Provide a diagram locating each monitoring well and waste site(s). List depths, diameter and completion data on each well not included on the previous inspection. ERM's report which includes all well log data & locations for all new wells is			
5. Has an adequate ground water sampling and analysis plan been developed?	✓		
Date of evaluation: March 15, 1984			
If not, list deficiencies:			
Is the plan followed?	✓		
6. If monitoring for the first year, are the samples analyzed for: For previously located wells only. See attached plan for new wells.			✓
EPA drinking water standards? Cd, Cr, Pb only			
Ground water quality parameters? Cl, Fe, Mn, Phenols, Na, SO4	✓		
Ground water contamination parameters? pH SC TOC			
Are 4 replicate measurements made for each upgradient well sample?	✓		
Are ground water surface elevations determined at each well each sampling event?	✓		
7. Does the facility have an adequate Ground Water Quality Assessment Plan outline?	✓		
Date of evaluation: previous inspection on July 21, 1983			

8. For facilities in their second or later year of ground water sampling and analysis:

	Yes	No	Not Applicable
Are wells sampled and analyzed ~~annually~~ quarterly for ground water quality parameters?	✓		
Are wells sampled and analyzed ~~semi-annually~~ quarterly for ground water contamination parameters?	✓		
Are ground water surface elevations determined at each well for each sampling event?	✓		
Were ground water surface elevations evaluated annually to determine whether monitoring wells are properly placed?	✓		
Were changes to the monitoring system necessary, to maintain compliance with 335.192(a)?	✓		

If so, describe: GB-4 has been relocated outside the Western Refuse Slurry wall (GB-4A). GB-3 has been relocated in a non-contaminated area (GB-3A). and GB-2 has been relocated.

Are 4 replicate measurements made for each upgradient and downgradient well sample? If not, explain:	✓		

9. Are statistical comparisons, using the Student's t-test at the 0.01 level of significance, performed:

Between the initial background mean and current upgradient well analyses for contaminated parameters? for previously located wells.	✓	
Between the initial background mean and current downgradient well analyses for contamination parameters? for	✓	
If there is more than one upgradient well, are all the background data combined resulting in one background mean with variance for each contamination parameter or is each upgradient well mean and variance compared separately with downgradient well analyses? Circle appropriate phrase.	N/A	

10. No significant increases (or pH decreases) in contamination parameters been found in the:

Upgradient wells?		✓	
If no, did the company report the upgradient well change on the annual report form?			✓
Downgradient wells?	✓		

	Yes	No	Not Applicable
11. If significant increases (or pH decreases) in downgradient wells were detected, did the company:			
Resample the "affected" well(s), split the sample in two and analyze for the respective changing contamination indicator(s)?	✓		
Confirm the significant difference?	✓		
Notify the Executive Director within 7 days of confirmation?	✓		
Submit a certified ground water quality assessment plan within 15 days of notifying Executive Director?	✓		
12. If an assessment program is on-going, describe what has been completed so far. Install new wells GB2A, GB3A and GB4A and sample on a quarterly basis plus Cd, Cr, Pb.			
What is the expected completion date? The new wells were installed in Nov., 1983 and sampling has been instituted.			
13. Ground water analyses indicate no hazardous waste or hazardous waste constituents detected?		✓	
If yes, was the original detection monitoring program reinstated?		N/A	
If no, has an approved quarterly ground water monitoring program been implemented?	✓		
14. If the company is performing an alternate ground water monitoring program, is an adequate sampling and analysis plan followed?		N/A	
15. Are all wells sampled with the same equipment and procedures?	✓		
Is sampling equipment cleaned between wells to prevent cross-contamination?	✓		
16. Have records been kept of:			
Analyses for ground water parameters?	✓		
Calculations of means and variances?	✓		
Water surface elevations taken at each well each sampling event?	✓		
Calculations of significant differences?	✓		

16. continued

	Yes	No	Not Applicable
Analyses of duplicate samples for contamination confirmation?	✓		
Analyses of samples taken as a result of implementing the Ground Water Quality Assessment Plan?	✓		
Results of Ground Water Quality Assessment Plan:			
Rates of migration?			✓
Concentration of hazardous waste and/or constituents thereof?			✓
Analyses of quarterly ground water samples?	✓		

ERM-Southwest, inc.

GROUND WATER MONITORING WELL INSTALLATION REPORT
ARMCO, INC.
Houston, Texas NEW WELLS; GB2A, GB3A, GB4A

Background

ARMCO, Inc. operates a hazardous waste landfill facility (Greens Bayou landfill) for the disposal of electric furnace dust generated in steel-making operations. This landfill is adjacent to a Western Refuse Co. Class II landfill. Since ARMCO initiated the required ground water monitoring under the RCRA program in late 1981, Western Refuse Co. has built a slurry wall around most of their landfill with plans to complete the enclosure. It is anticipated that this will alter ground water flow patterns at the eastern (downgradient) end ofthe ARMCO landfill. In addition, one of the existing ground water wells was inadvertantly destroyed by construction equipment. As a result, ARMCO, Inc. has agreed with the Texas Department of Water Resources to install three new downgradient wells. This report documents that installation.

Monitoring Well Installation

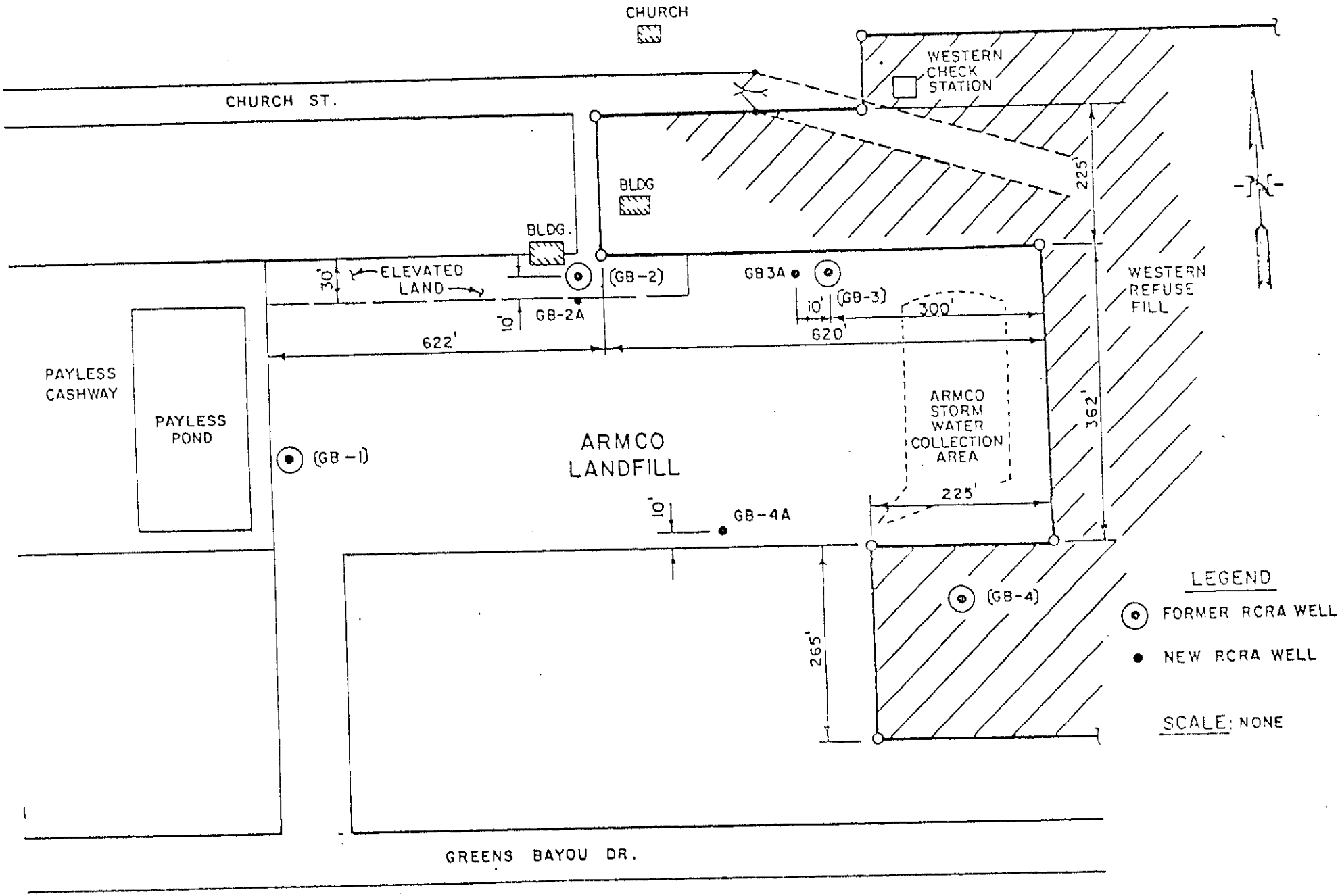
As requested by ARMCO, Inc., three ground water monitoring wells were installed at the Greens Bayou landfill facility, at locations shown in Figure 1.

All drilling and well installation procedures were supervised by an ERM-Southwest geotechnical engineer. Drilling was performed by a Failing 36 rotary drill rig equipped with 5-inch diameter auger and rotary drill bits. Fresh water from the on-site municipal water supply was used to facilitate drilling through the full depth of the saturated sand layer, extending from the base of the waste deposit to a maximum depth of 39 ft. below ground surface. Shelby tube or split-spoon soil cores were obtained at 5-foot depth intervals and logged in accordance with the unified Soil Classification System, (See Figure 2). Each borehole was flushed with fresh water to clear mud and silt prior to setting the well casing.

The monitoring wells were constructed of 2-inch schedule 40 PVC pipe fitted with #10 slot screen over the full depth of the saturated sand layer. To avoid organic contamination, no PVC glues, solvents, or cleaners were used in well

FIGURE 1

WELL LOCATION MAP



construction. The casing was centered in the borehole, and the annular space between the casing and the borehole wall was backfilled with No. 1 traction sand to the top of the well screen. The wells were sealed from the top of the sandpack to the ground surface with a layer of fine sand overlain by cement/bentonite grout. Protective pipes and concrete pads were installed at each well location to minimize potential damage by bulldozer traffic.

Upon completion, each well was developed by pumping until discharge was free of sediment, requiring a flush of approximately 150 gallons for wells GB-3A and GB-4A. Due to slow recharge, monitoring well GB-3A continued to discharge silty water at the completion of the surging and pumping process. To obtain accurate information on local groundwater quality, ground water samples from monitoring well GB-3A should be filtered to remove suspended solids prior to sample preservation or analysis.

The locations of the new monitoring wells are shown in Figure 1. Geologic logs and as-built drawings of the wells are presented in Figures 3 through 5.

Conclusion

The newly installed wells can be used for the RCRA ground water monitoring of this site.

UNIFIED SOIL CLASSIFICATION CHART

MAJOR DIVISIONS			GRAPH SYMBOL	LETTER SYMBOL	TYPICAL DESCRIPTIONS
COARSE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS LARGER THAN NO. 200 SIEVE SIZE	GRAVEL AND GRAVELLY SOILS — MORE THAN 50% OF COARSE FRACTION RETAINED ON NO. 4 SIEVE	CLEAN GRAVELS (LITTLE OR NO FINES)		GW	WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
				GP	POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
		GRAVELS WITH FINES (APPRECIABLE AMOUNT OF FINES)		GM	SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
				GC	CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
	SAND AND SANDY SOILS — MORE THAN 50% OF COARSE FRACTION PASSING NO. 4 SIEVE	CLEAN SAND (LITTLE OR NO FINES)		SW	WELL-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
				SP	POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
		SANDS WITH FINES (APPRECIABLE AMOUNT OF FINES)		SM	SILTY SANDS, SAND-SILT MIXTURES
				SC	CLAYEY SANDS, SAND-CLAY MIXTURES
FINE GRAINED SOILS — MORE THAN 50% OF MATERIAL IS SMALLER THAN NO. 200 SIEVE SIZE	SILTS AND CLAYS	LIQUID LIMIT LESS THAN 50		ML	INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTY OR CLAYEY FINE SANDS OR CLAYEY SILTS WITH SLIGHT PLASTICITY
				CL	INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
				OL	ORGANIC SILTS AND ORGANIC SILTY CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS	LIQUID LIMIT GREATER THAN 50		MH	INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS FINE SAND OR SILTY SOILS
				CH	INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
				OH	ORGANIC CLAYS OF MEDIUM TO HIGH PLASTICITY, ORGANIC SILTS
HIGHLY ORGANIC SOILS				PT	PEAT, HUMUS, SWAMP SOILS WITH HIGH ORGANIC CONTENTS

▽ DEPTH OF SATURATED SOIL

▽ STATIC WATER LEVEL

FIGURE 2

Environmental Resources Management

Drilling Log

Project Greens Bayou Landfill Owner ARMCO

Location Houston, Texas W.O. Number

Well Number GB2A Total Depth 30 ft. Diameter 5 in.

Surface Elevation Water Level, Initial 24-hrs

Screen: Dia 2 in. Length 15 ft. Slot Size .010 in.

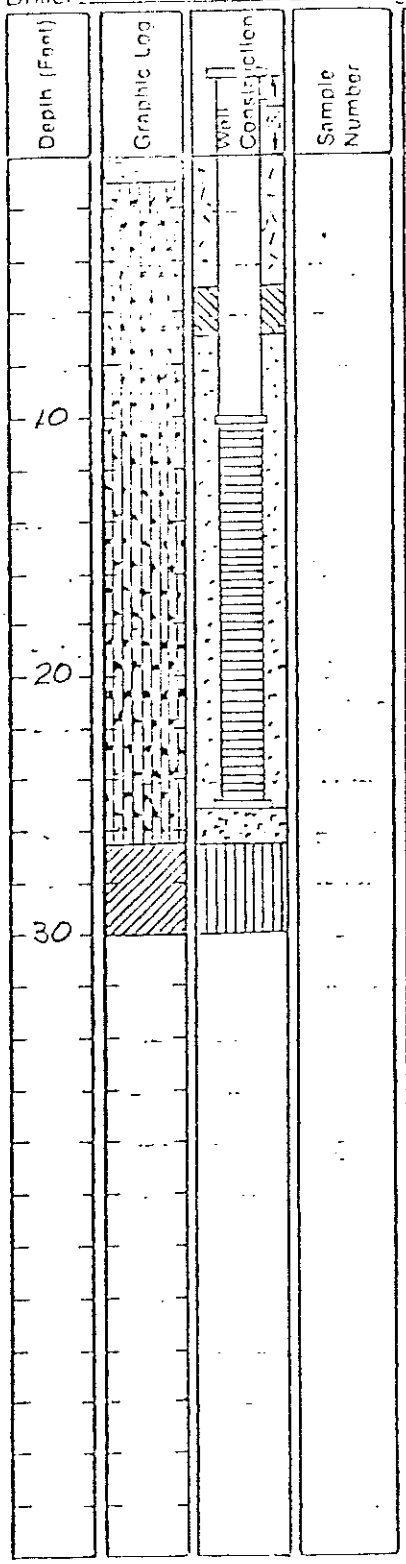
Casing: Dia 2 in. Length 10' & 3' riser Type PVC, Schedule 40

Drilling Company Younger Drilling Drilling Method Rotary

Driller Ted Younger Log By J.A. Connor Date Drilled 11/14/83

Sketch Map

Notes



Description/Soil Classification *
(Color, Texture, Structures)

Dark brown furnace dust

Light tan, moderately silty, fine sand (SM)

- with yellowish orange color from 12 to 17 ft.

- with thin clay and silt seams from 18 to 20 ft.

Light greenish grey, stiff, very silty clay (CL) with orange mottling

Total Depth 30.0 ft.

*Unified Soil Classification System, visual inspection

Figure 3

Environmental Resources Management

Drilling Log

Project: Greens Bayou Landfill Owner: ARMCO

Location: Houston, Texas W.O. Number:

Well Number: GB3A Total Depth: 42 ft. Diameter: 5 in.

Surface Elevation: Water Level: Initial: 24-hrs:

Screen: Dia. 2 in. Length: 10 ft. Slot Size: .010 in.

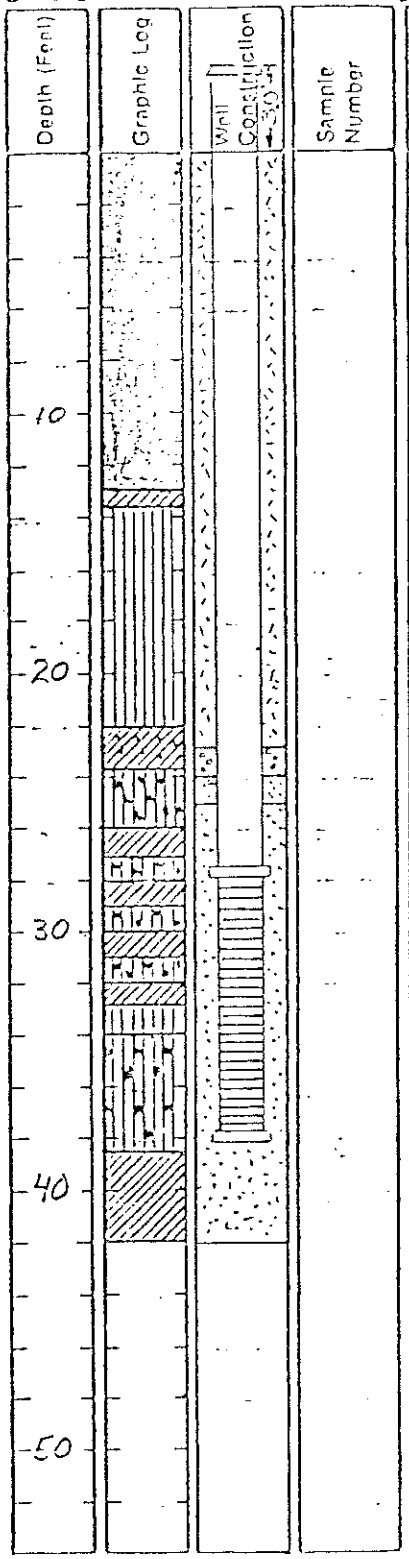
Casing: Dia. 2 in. Length: 28' & 3' riser Type: PVC, Schedule 40

Drilling Company: Younger Drilling Drilling Method: Rotary

Driller: Ted Younger Log By: J.A. Connor Date Drilled: 11/15/83

Sketch Map

Notes



Description/Soil Classification*
(Color, Texture, Structures)

Dark brown furnace dust

Mottled brown and grey, silty clay fill

Misc. trash and rubble (wood, glass, plastic, etc.)

Light greenish-grey, sandy clay (CL), grading to clayey sand (SC)

Yellowish-tan, moderately silty, fine sand (SM)

- with alternating clayey sand and silty-sand layers from 27 to 34 ft.
- green to light gray silty sandy by 34 ft.

Mottled brown and grey CLAY (CH)

Total Depth 42.0 ft.

*Unified Soil Classification System, visual inspection

Figure 4

Environmental Resources Management

Drilling Log

Project: Greens Bayou Landfill Owner: ARMCO

Location: Houston, Texas W.O. Number:

Well Number: GB4A Total Depth: 41 ft. Diameter: 5 in.

Surface Elevation: Water Level: Initial: 24-hrs:

Screen: Dia. 2 in. Length: 15 ft. Slot Size: .010 in.

Casing: Dia. 2 in. Length: 12' & 3' riser Type: PVC, Schedule 40

Drilling Company: Younger Drilling Drilling Method: Rotary

Driller: Ted Younger Log By: J.A. Connor Date Drilled: 11/14/83

Sketch Map

Notes

Depth (Feet)	Graphic Log	Construction	Sample Number	Description/Soil Classification (Color, Texture, Structures)
				Dark brown furnace dust
				Mixed sand and clay fill
10				Light grey, silty, fine sand (SM)
				- grades to moderately silty by 18 ft.
20				Orange, silty sand (SM), with orange silt seams from 23.5 to 24 ft.
				Blue-grey, silty CLAY (CL)
30				- grading to sandy clay by 28 ft. - with seam of calcoreous nodules from 37 to 33.5 ft.
40				Mottled brown and light grey, stiff, very silty CLAY (CL)
				Total Depth 41.0 ft.
50				

Figure 5

ARMCO

PROPOSED SAMPLE SCHEDULE

	Up Gradient	Down Gradient		
	GB-1	GB-2A	GB-3A	GB-4A
pH	4 reps/qtr.	4 reps/qtr.	4 reps/qtr.	4 reps/qtr.
SC	" "	" "	" "	" "
TOC	" "	" "	" "	" "
Cl, Fe, Mn, Phenols, Na, SO_4	---	---	---	1 set in one quarter

Quarters - ~~5/20~~ - 8/19/83
8/20 - 11/19/83
11/20 - 2/19/84
→2/20 - 5/19/84
5/20 - 8/19/84

CONTENTS

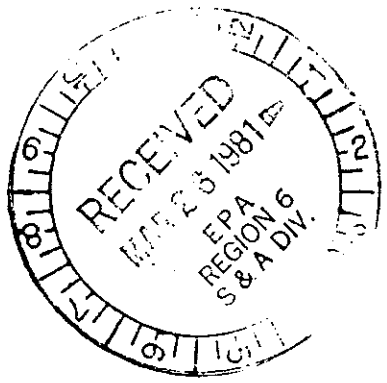
Facility Name ARMCO Steel Corp. Reg. # 30124

- ✓ 1. CM&E Code Sheet 0814
- ✓ 2. Contents Sheet (if included)
- ✓ 3. Major Group I Checklist or Non Major Checklist
  2b. Deficiency letter
- ___ 4. *Facility Checklists
  - ___ A. Landfills
  - ___ B. Surface Impoundments
  - ___ C. Land Treatment
  - ___ D. Tanks
  - ___ E. Chemical, Physical, Biological Treatment
  - ___ F. Waste Piles
  - ___ G. Incinerators
  - ___ H. Thermal Treatment
- ✓ 5. Closure and Post-Closure Compliance Review Checklist
- ✓ 6. Ground Water Monitoring Program Checklist
- ✓ 7. Financial Assurance, Closure and Post Closure Worksheet
- ✓ 8. Major Facilities Status Sheet (Not Required for Non Majors)
- ___ 9. Generator/Facility/Transporter (GFT) Status (Not Required for Majors)

* If a Required Checklist is Omitted, Explain Below:

The appropriate facilities checklists have been submitted with previous inspection reports.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



DATE: 3/20/81

SUBJECT: Transmittal Memo - Compliance Monitoring Report(s)

FROM: Robert H. Reeves, P.E. (Inspector)

6ASAA Ada (Branch)

TO: 6ASA

THRU: Robert H. Reeves, P.E.,6ASAA

A compliance monitoring inspection was conducted on Dec. 4, 1980 (Date(s))

at the following location:

Name: Armco, Inc. Southwestern Steel Div.

Address: Houston Works, Houston, Tx

NPDES Permit No. N/A AQCR: N/A

Type of Facility: Federal ( ) Municipal ( ) Non-Municipal (X)

Compliance Monitoring Reports Attached: (Check appropriate space)

Water		Air		O & M		SPCC	TSCA	RCRA
NPDES	( )	SIP	( )	Form 7500-5	( )	X	( )	X
Form 3560-3	( )	NSPS	( )	Deficiency Report	( )	✓		
Major	( )	NSR	( )			RFE		
Minor	( )	PSD	( )					
NOD	( )	NESHAP	( )					
CEI	( )	Demo.	( )					
CSI	( )			Citizen's Complaints	( )			
129 P. P.	( )							
Bioassay	( )			Oil & Hazardous Substance Spill Investigation Form	( )			
Salmonella	( )							
PCB	(X)							
Drinking Water	( )							

Comments: Landfill used to dispose of hazardous waste not yet completely fenced; readily accessible by City street. Leaching of hazardous waste (bag house dust from elec. furnace) may contaminate groundwater. Landfill has no liner or seal.

EPA Form 1320-6 (Rev. 3-76)

Ref # 5

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

DATE: 3/31/89

SUBJECT: RCRA Compliance Monitoring Inspection Reports

FROM: Charles A. Gazda, Chief
Compliance Section (6ASASC)

TO: Fred Woods, Chief
Administrative Branch (6AEP)

The attached RCRA Compliance Monitoring Inspection Reports have been prepared and reviewed by S&A and are being forwarded to you for your information and action.

Facility	EPA I.D. No.	Apparent Violation	
		Yes	No
Armco Inc., Houston Works also includes (Armco Owned) Greens Bayou Landfill	TXD000802942	✓	
	TXD000802959	✓	

EPA Form 1320-6 (Rev. 3-76)

RCRA INSPECTION

1. SITE IDENTIFICATION

Houston Works, Armco, Inc.; Industrial Road

A. Site Name P.O. Box ~~77015~~ 96120 B. Street (or other identifier)
Attn: Joe H. Brown
Houston, Tx 77013 Harris
C. City D. State E. Zip Code F. County Name

G. Site Operator Information 713/960-6561
1. Name 2. Telephone Number
Joe H. Brown, Supt. of Energy & Environmental Control
3. Street 4. City 5. State 6. Zip Code
Same

H. Site Description Intergrated Steel Mill generates Haz. Waste and disposes of these wastes by landfill and commerical disposal facilities.

I. Type of Ownership
____1. Federal ____2. State ____3. County ____4.Municipal ✓ 5 Privat

J. ✓ 1. Generator ____2. Transporter ___3.Treatment ✓ 4.Storage ✓ 5.Disposal

INSPECTION INFORMATION

A. Principal Inspector Information
1. Name 2. Title
Robert H. Reeves, P.E. Environmental Engineer
3. Organization 4. Telephone No. (area code & No.)
EPA, Reg. 6, 5ciA Div., Ada Branch 405/332-8800

B. Inspection Participants phone 713-960-6291
Bill Cody, Assoc. Pollution Control Engineer
Nancy Worst, ~~Envir~~ Pollution Control Tech.
John Luton, Envir. Engineer
Bill Chadick, Sr. Envir. Eng.
Joe H. Brown, Supt. of Energy & Environmental Co

RCRA COMPLIANCE INSPECTION REPORT
GENERATORS CHECKLIST

Checklist filled out 12/4/80.

Section A - EPA Identification No.

1. Does Generator have EPA I.D. No.? ✓ Yes ___ No

   a. If yes, EPA I.D. No. TXD000802942 Armco Inc., Houston, Tx

Section B - Manifest

1. Does generator ship waste off-site? ✓ Yes ___ No

   a. If no, do not fill out Sections B and D.

   b. If yes, identify primary off-site facility(s) Use narrative explanations sheet.) Greens Bayou Landfill used by Company, Commerical Sites include; 1) CSI ; 2) Malone Service Co.

2. Does generator use Manifest? ✓ Yes ___ No

   a. If no, is generator a small quantity generator? ___ Yes ✓ No
      1. If yes, does generator indicate this when sending waste to a T/S/D facility ~~✓~~ Yes ___ No

   b. If yes, does manifest include the following information?

      1. Manifest Document No. ✓ Yes ___ No

      2. Generators Name, Mailing Address, Telephone No. ✓ Yes ___ No

      3. Generator EPA I.D. No. ✓ Yes ___ No

      4. Transporter(s) Name and EPA I.D. No. ___ Yes ✓ No
         Transporter has not yet received EPA I.D. No.

      5. a. Facility Name, Address and & EPA I.D. No. ✓ Yes ___ No
      1/ b. Alternate Facility Name, Address and EPA ID NO. ___ Yes ✓ No
         c. Instructions to return to generator if undeliverable? ✓ Yes ___ No

      6. Waste information required by DOT - Shipping name, quantity, (weight, or vol.) containers (type and number.) Armco declares that DOT Regulations do not apply to this material, ie K061. ___ Yes ✓ No

      7. Emergency Information (optional) (special handling instructions, phone no.) ✓ Yes ___ No

1/ Using company owned site, alternate site not necessa. Armco using Texas Dept. of Water Resources Manifest ~~##~~ form which does not include a space for an alternate site.

(8) Is the following certification on each manifest form? Certification put on ✓ Yes ___ No
Tex. Manifest by Co. does not ~~not~~ include all of required wording but does carry the intent.
This is to certify that the above named materials are properly classified, described, packaged, marked and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the EPA.

(9) Does Generator retain copies of Manifests? ✓ Yes ___ No

If yes, complete a through e.

a. (1) Did generator sign and date all manifests? ✓ Yes ___ No
(2) Who signed for generator? Name Bill Cody Title Assoc. Pollution Control Eng.

b. (1) Did generator obtain handwritten signature and date of acceptance from initial transporter? ✓ Yes ___ No
(2) Who signed and dated for transporter? Name Bill Liggett Title Truck Driver

c. Does generator retain one copy of manifest signed by generator and transporter? ✓ Yes ___ No

d. Do returned copies of manifest include facility owner/operator signature and date of acceptance? ✓ Yes ___ No

e. Does generator retain copies for 3 years? ✓ Yes ___ No

Section C - Hazardous Waste Determination

1. Does generator generate solid waste(s) listed in Subpart D (List of Hazardous Waste)? ✓ Yes ___ No

a. If yes, list wastes and quantities (include EPA Hazardous Waste No.) See Attached Part A, Form 3

2. Does generator generate solid waste(s) that exhibit hazardous characteristics? (corrosovity, ignitability, reactivity, EP toxicity) ✓ Yes ___ No

a. If yes, list wastes and quantities (include EPA Hazardous Waste No.) See Attached Part A, Form 3

b. Does generator determine characteristics by testing or by applying knowledge of processes? Knowledge of processes

1. If determined by testing, did generator use test methods in Part 261, Subpart C (or Equivalent)? ✓ Yes ___ No
If any testing is required, these procedures will be used.

a. If equivalent test methods used, attach copy of equivalent methods used.

3. Are there any other solid wastes generated by generators? ✓ Yes ___ No

   a. If yes, did generator test all wastes to determine non-hazardous characteristics? ✓ Yes ~~✓~~ No RCRA

      1. If no, list wastes and quantities deemed non-hazardous or processes from which non-hazardous waste was produced? (Use additional sheet if necessary.)

Section D - Pre-Transport Requirements

1. Does Generator package waste in accordance with 49 CFR 173 178, and 179? (DOT requirements) ✓ Yes ___ No
   DOT Requirements are ~~N/A~~ N/A according to Armco.
2. a. Are containers to be shipped leaking or corroding? ___ Yes ✓ No
   b. Use sheet to describe containers and condition.
   c. Is there evidence of heat generation from incompatible wastes in the containers? ___ Yes ✓ No
   No haz. waste in drums at time of inspection.
3. Does the generator use DOT labeling requirements in accordance with 49 CFR 172? ✓ Yes ___ No
   See No. 1 of Sec. D.
4. Does the generator mark each package in accordance with 49 CFR 172? This will be done when drums are used. ✓ Yes ___ No
5. Is each container of 110 gallons or less marked with the following label? See #4 ✓ Yes ___ No

   Label saying: HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest policy or public safety authority or the U.S. Environmental Protection Agency.

   Generator's Name and Address _____

   _____

   Manifest Document Number _____ _____

6. Does generator have placards to offer to transporters? ✓ Yes ___ No
7. Accumulation Time

   a. Are containers used to temporarily store waste before transport? They will be, but have not yet been needed. ✓ Yes ___ No

1. If yes, is each container clearly dated? Also, fill out rest of No. 7 (Accum. Time) N/A ___ Yes ___ No

b. 1. Does generator inspect containers for leakage or corrosion? (265.174 - inspections) ✓ Yes ___ No
2. If yes, with what frequency? See # 4 under D

c. Does generator locate containers holding ignitable or reactive waste at least 15 meters (50 feet) from the facility's property line? (265.176 - Special Requirements for Ignitable or Reactive Wastes) ✓ Yes ___ No

NOTE: If tanks used, fill out checklist for tanks.

d. Are the containers labeled and marked in accordance with Section D 3, 4, & 5 of this form? ✓ Yes ___ No

NOTE: If generator accumulates waste on-site fill out checklist for General Facilities, Subparts C and D.

e. Does generator comply with requirements for personnel training? (Attach checklist for 265.16 - Personnel Training). ✓ Yes ___ No

8. Describe storage area. Use photos and narrative explanation sheet.

Section E - Recordkeeping and Records

1. Does generator keep the following reports for 3 years?

a. Manifests and signed copies from designated facilities? ✓ Yes ___ No
b. Annual reports ✓ Yes ___ No
c. Exception Reports ✓ Yes ___ No
d. Test results ✓ Yes ___ No

2. Where are records kept (at facility or elsewhere)? Facility
3. Who is in charge of keeping the records? Name Bill Cody Title Assoc. Pollu. Con. E.

Section F - Special Conditions

1. Has generator received from or transported to a foreign source any hazardous waste? ___ Yes ✓ No
a. If yes, has he filed a notice with the Regional Administrator? ___ Yes ___ No
b. Is this waste manifested and signed by Foreign consignee? ___ Yes ___ No
c. If generator transported wastes out of the country has he received confirmation of delivered shipment? ___ Yes ___ No

27-04-05

ARMCO INC.

WESTERN STEEL DIVISION

ARMCO

ADDRESS REPLY TO
P. O. BOX 96180
HOUSTON, TEXAS 77018

bxc: C. W. Hansen
C. G. Ward w/all attachments
R. C. Conley " " "
J. P. McGlone
G. A. Kane
J. H. Brown w/all attachments
J. O. Berryman
W. B. Chadick
J. W. Luton
W. R. Cody
Lou Boehm
R. J. Thompson w/all attachments
J. A. DiNardo " " " "
N. D. Radford " " " "
27-04-02 " " " "

November 12, 1980

Permit Contact (6AEP)
U.S. ENVIRONMENTAL PROTECTION AGENCY
First International Building
1201 Elm Street
Dallas, Texas 75720

Gentlemen:

Reference: CONSOLIDATED PERMIT PROGRAM

Enclosed are Part A Interim Status permit applications for Armco Inc's Houston Works and the Houston Works Greens Bayou Landfill. These forms and the information supplied represent Armco's best attempt at fulfilling the stipulated requirements. Due to the lack of time, technical guidelines and regulatory interpretation or guidance concerning the Resource Conservation and Recovery Act (RCRA), these applications may not be as complete as necessary.

Very truly yours,

Armco Inc.

Cliff G. Ward
President, Southwestern Steel Division

pd
Enclosure